the future of touch

ēlo
TOUCHSYSTEMS

industrial

retail

gaming

hospitality

medical

fall 1999
product catalogue

fall 1999

product catalogue

Contents

ELO
TOUCHSYSTEMS

Why choose touch?

In the old days, touchscreens were an exotic, expensive interface for high-tech applications like air traffic control and controlling nuclear power plants. Not anymore! Companies across a broad spectrum of industries have successfully harnessed the power of touch for a wide variety of applications. Yet, the essential benefits provided by touch technology remain unchanged.

Suitable for all ages

A baby intuitively reaches out for what it wants. Using touch is just as simple: you just point at what you want. Although some still shy away from computer keyboards and mice, there is no hesitation when you can just touch a screen. We instinctively realize no training is needed and that we cannot do anything wrong to it. Whether it's a person consulting a kiosk, a worker controlling an industrial process, a nurse entering a patient's information or a waiter entering the order, touchscreen systems make everyone an "expert user".

Compact and handy

Space is valuable, so you want to use it as efficiently as possible. Touchmonitors ensure that no space – on the desktop or elsewhere – is wasted, as the input device is completely integrated into the monitor. Flat LCD touchmonitors help save even more space. And perhaps best of all, there are no wires in front of the monitor to get tangled or damaged.

Fast, faster, fastest

Touchscreens provide fast access to any and all types of digital media, with no text-bound interface getting in the way. It takes time for the user to grab a mouse or use a keyboard or trackball and co-ordinate it with what he or she wants to activate on the display. Often the results are annoyances such as longer lines at cashiers or ticket-dispensing machines. In other cases, such as in-vehicle control or security equipment, being one second too late could make all the difference.

Durable and easy to clean

A touchscreen is made out of glass or a similar hard-coated surface. So it is easy to clean and therefore extremely well suited for applications where hygiene is key, like restaurants, hospitals and in the food and pharmaceutical industries. All of Elo's technologies can be used with gloves. Moreover, we offer touchscreen systems that are not affected by dirt, dust, grease or liquids. They are even rugged enough to stand up to harsh environments where keyboards and mice often get damaged.

When ease of use is required

Touchscreen systems virtually eliminate operator errors because users select from clearly defined menus. The information on the screen at one time is limited in number and options, thus providing step-by-step, fail-safe sequences to guide the user through complex procedures. This greatly simplifies medical diagnostics applications, for example, where voluminous databases need to be accessed quickly and easily. Touchscreens are also useful in simplifying process control applications involving a large number of buttons or switches, and for applications where system contents require protection from unauthorized entry.

Where can I use touch?

point of sale
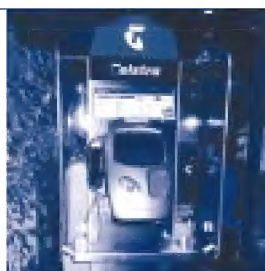
interactive payphone

electronic voting

home control

loyalty system

car diagnostic system

ticket sale

Touch technologies can be used on virtually any computer, and the list of applications is limited only by your imagination. Common touchscreen applications include:

- Point-of-information kiosks
- Electronic catalogues
- Gaming, lottery and amusement
- Multimedia marketing
- Banking/financial transactions
- Ticket sales
- Interactive payphones
- Industrial control room
- Point-of-sale terminals
- Industrial process control
- Handheld computers
- Medical equipment
- Office equipment (photocopiers, franking machines, etc.)
- In-vehicle and in-flight applications

Please go to pages 6 - 7 to find out which combination of touch technology and form factor best suit your application and needs.

multimedia marketing

industrial process control

transaction kiosk

Elo, your partner for touch

In 1971, Dr. Samuel C. Hurst – the founder of Elo TouchSystems – invented the world's first electronic touchscreen interface. Today, almost 30 years later, Elo is still leading the way: not only are we considered the standard for touch technology, we are also renowned for our wide range of integrated touchscreen systems as well as our dedicated customer service. Whatever the market you're in – **Retail, Industrial, Hospitality, Gaming, or others** – here's why Elo is your best choice when looking for a touchscreen partner.

Our customers are convinced

Thousands and thousands of customers around the world choose Elo – we have already installed millions of touchscreen systems. We won these customers not only with our superior product quality but, based on annual customer satisfaction surveys, we also continuously improve our standards of professional competence and customer care.

We invest heavily in R&D to give you the best choice of touch technologies

We know that our leadership position can only be kept by offering the best touchscreen products possible to a broad cross-section of industries. That's why we invest heavily in R&D. We have over thirty current patents. Moreover, with Tyco Electronics as our parent, we have considerable technical expertise and resources at our disposal. As a result we offer the largest selection of components, touchmonitors and development tools available anywhere.

We guarantee quality from order to delivery

Whether they work on the manufacturing floor, in customer service or in the president's office, every employee at Elo TouchSystems participates in a Total Quality Management process. We recognize quality not as a finite goal but as a never-ending improvement process throughout all levels of the organization. Our technologies are the benchmark for quality, durability and performance. Moreover, we offer same-day shipments on most of our products and provide in-depth technical assistance to customers throughout the world. Elo has been an ISO 9001 certified company since 1994.

We care for our people so they care for you

We want our people to care for you and to be motivated, even in this fast-changing environment we're conducting our business in. That's why we ensure that values such as teamwork and integrity are part of our daily lives. Secondly, we created an injury-free and participative work place where individual contributions are recognized. And last but certainly not least, we conduct regular, in-depth sales and marketing trainings at our Elo University.

Kessel-Lo (Louvain), Belgium

Elo's facility in Belgium resides on the site of Raychem, a unit of Tyco Electronics.

Fremont (California), USA

Elo TouchSystems' newest facility, in Silicon Valley, California, serves as the company's headquarters, R&D center and main manufacturing site.

Ottobrunn (Munich), Germany

In January 1998, Elo moved its facilities in Germany onto the site of Raychem, a unit of Tyco Electronics.

How to find the right touch solution

Finding the right touch solution for your business means matching your application needs with your form factor requirements and experience with electronics integration. Please use this guide to assist you or call Elo directly.

Your application needs	Specific Elo features

Clerk- or employee-activated applications

- Point-of-sale terminals
- Industrial process control
- Handheld computers
- Medical equipment
- Office equipment
  (photocopiers, franking machines, etc.)
- Transportation

- ✔ Stable, 'drift-free' operation for touch response that's always accurate
- ✔ Highest touchpoint density
- ✔ Fast touch response
  - ✔ Finger, gloved hand, and stylus activation
- ✔ Durable surface
- ✔ Sealable to IP65
- ✔ Flat and curved touchscreen options allow design flexibility
- ✔ Is not activated by dust or dirt

Self-service applications

- Point-of-information kiosks
- Electronic catalogues
- Gaming, lottery and amusement
- Multimedia marketing
- Banking/financial transactions
- Ticket sales
- Interactive payphones
- Industrial control room

- ✔ Pure-glass touchscreen for superior image clarity, brightness, and light transmission
- ✔ Durable, scratch-resistant glass surface
- ✔ Even works with static water droplets and deep scratches on the screen
- ✔ Stable, "drift-free" operation – for touch response that's always accurate, even in electronically noisy environments
  - ✔ Touch response is faster than human perception
- ✔ Smart touch response – no false touches
- ✔ Finger, gloved hand and soft stylus activation
- ✔ Flat and curved touchscreen options for design flexibility
- ✔ Anti-glare glass option
- ✔ SecureTouch option on fully-tempered glass

Elo technologies

AccuTouch
5-wire resistive technology

- AccuTouch overlay touchscreens
  - flat
  - curved

IntelliTouch
surface wave technology

- IntelliTouch overlay touchscreens
- iTouch 'Touch-on-Tube'
- SecureTouch 'vandal-resistant'

All Elo technologies are recognized for their:
- Stable calibration
- High resolution
- Long touch lifetime

Form factor

Touchscreens & touch controllers
- Serial, PC-Bus and USB options
- PC and Macintosh
- ASICs

LCD touchmonitors
- Kiosk
- Desktop
- Industrial

CRT touchmonitors
- Kiosk
- Desktop
- Industrial
- Gaming

Elo supplies you with a fully warranted and agency approved touchmonitor, built to Elo quality standards in ISO 9000 facilities.

## What are you planning to do?

Add touch to your product display?

For OEMs, Monitor Integrators and Custom Solution Providers.

Add a touch display to your system?

For System Integrators, IT Distributors, Resellers and End-Users.

AccuTouch: five-wire resistive technology

How it works

Formed to fit the shape of a display, the AccuTouch glass panel has a coating of uniform resistivity. A polyester cover sheet is tightly suspended over the top of the glass, separated from it by small, transparent insulating dots. The cover sheet has a hard, durable coating on the outer side and a conductive coating on the inner side. With a light touch, the conductive coating makes electrical contact with the coating on the glass. The AccuTouch controller circuit applies a voltage gradient across the resistive surface of the glass. The voltages at the point of contact are the analog representation of the position touched. The controller digitizes these voltages and transmits them to the computer for processing.
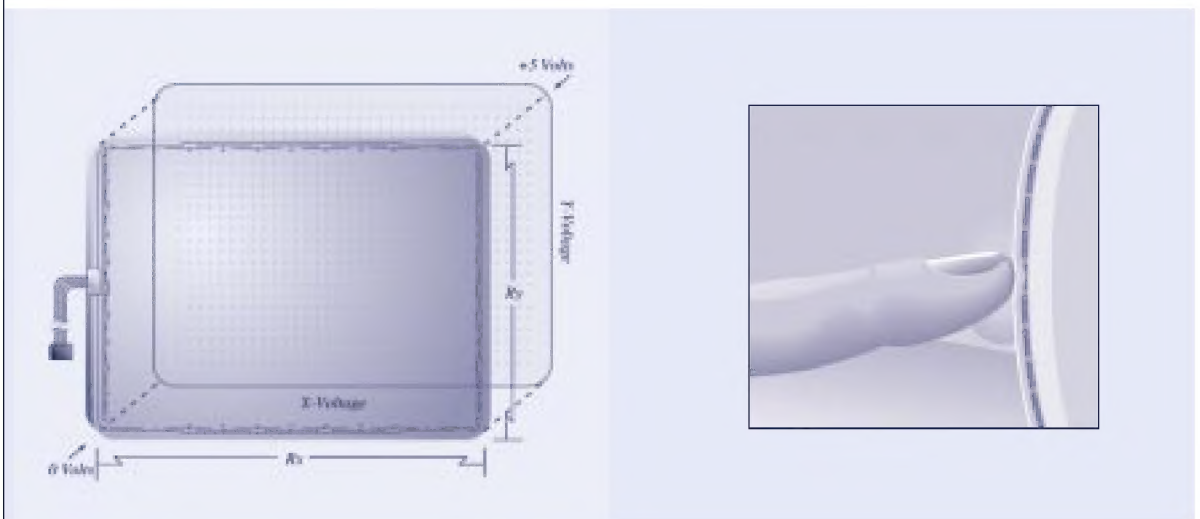
How you and your customers benefit from AccuTouch

Elo TouchSystems designed AccuTouch touchscreens with the harshest environments in mind, so it's no wonder they excel in reliability, durability and expected product life. Impervious to environmental conditions such as liquid spills and splashes, humidity, and washdown, these touchscreens provide the most contamination resistance available on the market today. And AccuTouch touchscreens deliver drift-free operation for at least 35 million touches.

AccuTouch:
- Five-wire resistive technology – tenfold the durability of four-wire and eight-wire
- Stable, "drift-free" operation for touch response that's always accurate
- Highest touchpoint density in the industry
- Fast touch response
- Finger, gloved-hand, and stylus activation
- Durable surface that stands up to harsh contaminants and chemicals
- Gasket sealable
- Flat and spherical touchscreen options allow design flexibility
- Is not activated by dust or dirt

ACCUTOUCH PERFORMANCE

Accuracy	± 2.03 mm
Reaction time	< 10 ms
Touchscreen resolution	4096 x 4096 touchpoints
Light transmission	up to 75%
Operating temperature	− 10°C to + 50°C
Storage temperature	− 40°C to + 71°C
Sealability	IP65
Expected life	Tested to over 35 million touches on one spot without failure
Chemical resistance	Tested with acetone, methylene, isopropylalcohol, ammonia, etc.

SPECIFICATIONS ACCUTOUCH CONTROLLER

Accuracy	± 2.03 mm
Reaction time	< 10 ms
Operating temperature	0°C to 70°C
Storage temperature	− 25°C to 85°C
Voltage supply	5 Volt DC, standby: 50 mA, touch: 160 mA
MTBF	> 107,000 hours

IntelliTouch: surface wave technology

How it works

The IntelliTouch touchscreen is a glass overlay with transmitting and receiving piezoelectric transducers for both the X and Y-axes. The touchscreen controller sends a five-megahertz electrical signal to the transmitting transducer, which converts the signal into ultrasonic waves on the surface of the glass. These waves are directed across the front surface of the touchscreen by an array of reflectors. Reflectors on the opposite side gather and direct the waves to the receiving transducer, which reconverts them into an electrical signal – a digital map of the touchscreen surface. When you touch the screen, a portion of the wave traveling across it is absorbed. The received signal is then compared to the stored digital map. The change is recognized, and a coordinate is calculated. This process happens independently for both the X and Y-axes. By measuring the amount of the signal that is absorbed, a Z-axis is also determined. The digitized coordinates are transmitted to the computer for processing.

Transducer

Transducers

Reflectors on each axis divert the ultrasonic burst across the touchscreen

Transducer
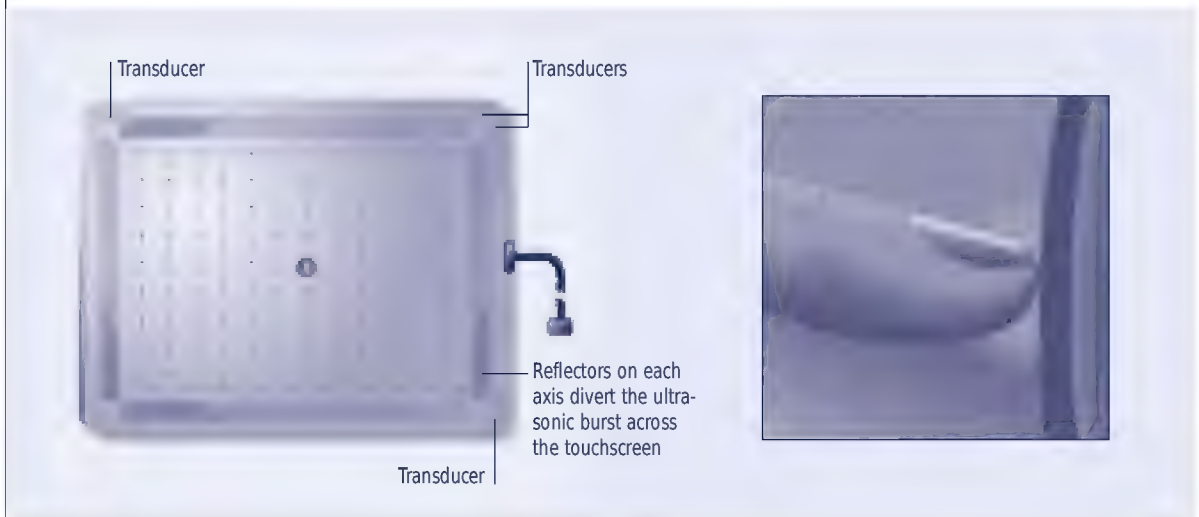
How you and your customers benefit from IntelliTouch

When you need to deliver the brightest, clearest image, take a look at IntelliTouch – the intelligent touchscreen. As a solid-glass touchscreen with no metallic coatings or plastic films, IntelliTouch just doesn't wear out and even works when scratched. With nothing but clear glass between you and the image, you get the truest image quality possible with a touchscreen overlay.

IntelliTouch:
- Pure-glass touchscreen for superior image clarity, brightness, and light transmission
- Durable, scratch-resistant glass surface
- Even works with static water droplets and deep scratches on the screen
- Stable, "drift-free" operation – for touch response that's always accurate, even in electronically noisy environments
- Touch response is faster than human perception
- Smart touch response – no false touches
- Also works with gloved hands or a soft stylus
- Flat, spherical and cylindrical touchscreen options for design flexibility
- Available with anti-glare glass

INTELLITOUCH PERFORMANCE	
Accuracy	± 2.03 mm
Reaction time	< 10 ms
Touchscreen resolution	4096 x 4096 touchpoints
Light transmission	90% (glass)
Operating temperature	– 20°C to + 50°C
Storage temperature	– 40°C to + 71°C
Sealability	IP 54
Surface durability	Glass (7 on the Mohs scale)

SPECIFICATIONS INTELLITOUCH CONTROLLER	
Reaction time	< 10 ms
Operating temperature	0°C to 65°C
Storage temperature	– 40°C to + 71°C
Voltage supply	+ 5 Volt DC nominal 140 mA
MTBF	> 509,000 hours
Z-axis capability	255 levels of pressure sensitivity

We've extended our IntelliTouch surface wave product line

iTouch, when quality images are a must

Elo's latest innovation is **iTouch** "touch-on-tube" where the IntelliTouch surface waves travel directly in the glass of the cathode ray tube (CRT). The result? No need for a glass overlay. Without a glass overlay, light transmission is 100% thus offering the highest quality image possible. And since CRT faceplate glass is several times stronger than any touchscreen (bonded or not) on the market today, higher durability in public access applications is also ensured.

SecureTouch, our vandal-resistant touchscreen

SecureTouch is Elo's IntelliTouch overlay solution for environments where greater glass strength is required, such as public access, where the risk of vandalism is high, or in industrial applications. Two versions are available: 6 mm tempered glass and 12 mm heat-strengthened glass.

The basic elements of a touchscreen system

How a touchscreen system works:

Elo can supply you with complete touchmonitors (with integrated display monitor, touchscreen and controller). Four basic elements make up a complete touchscreen system: a touchscreen, a controller, drivers and application software. Elo manufactures all the hardware elements, yet we can also help you choose a software partner

complete touchmonitors [see pages 13-39]

touchscreens [see pages 40-43]

controllers [see pages 44-46]

touchtools [see page 47]

application software [Partner Programs see pages 48-49]

For more detailed information, check out our website: www.elotouch.com

The advantages of getting your integrated touchmonitor from Elo

Buying touchmonitors directly from Elo instead of integrating touchscreens into monitors yourself is the surest, fastest way to get your touchscreen application up and running. Indeed, after more than twenty-five years of integrating touchscreens into computer monitors of every conceivable description, Elo has channeled its engineering and manufacturing expertise into complete "Plug and Touch" solutions for its customers. Elo applies its extensive knowledge of touch technology and displays to the design and manufacture of high-quality, reliable touchmonitors with full agency approvals and Elo's renowned service and support.

You shop once. Elo touchmonitors allow you to source a complete touch hardware solution from one vendor, rather than three (touchscreen kit, monitor, integration service). So Elo touchmonitors save you time or a potentially high investment in monitor integration (capital equipment, supplies, facilities, expertise and personnel).

You get a touchmonitor designed for touch. Not all touchmonitors are created alike. Elo sets monitor specifications that enable the production of high-quality, low-cost monitors that are optimized for touch. Elo can also provide custom modification, incorporating a variety of cabling, sealing and internal controller and other options, so your touchmonitor is perfectly suited to your application.

Off-the-shelf touchmonitors get you up and running quickly. Elo and its distribution partners are also able to offer you next-day delivery on many products. Your touchmonitor is touch-ready, right out of the box.

Elo's kiosk touchmonitors have fixed outside dimensions. Elo will maintain the model design of its metal case touchmonitors much longer than the average plastic case monitor manufacturer, reducing the need to redesign your application around a monitor component change.

Avoid safety risks to yourself, or your monitor. Everyone knows to avoid electrical shock from high-voltage components inside the monitor, but did you know that it's possible to shorten the life of your monitor if the power tap is installed incorrectly? Or that a poorly sealed screen will allow dust to degrade the optics of your touchscreen? With an Elo touchmonitor you get the assurance of quality that lasts.

Elo uses ruggedized packaging. To ensure that the touchmonitor makes it to you - and on to your customer, Elo takes special care in securing touch components inside the monitor and using packaging that withstands all industry standard drop tests.

You have all the information. Elo touchmonitors ship with the Elo TouchTools CD, which contains drivers for all popular operating systems, demo software, technical manuals and diagnostic software. Drivers, technical information, and product specs are also available 24 hours a day on our website (www.elotouch.com).

Elo touchmonitors come with agency approvals. Elo only ships touchmonitors that are fully qualified to safety, EMI, and Low Emissions ratings. Any previous monitor manufacturer's qualifications are re-tested after the addition of touch components as required by law (FCC, CE, TÜV, UL, cUL). In fact, Elo's standard CRT touchmonitors contain all best-practice recognized features, such as digital on-screen display (OSD) controls; power management (EPA/energy star, VESA/DPMS); and Plug and Play compatibility (VESA DDC1 and 2B compliant).

Manufacturer's warranty. Without the agreement of the monitor manufacturer, a monitor's warranty is voided as soon as the monitor is opened. With an Elo touchmonitor you get Elo's guarantee, in warranty, of full customer satisfaction. And every Elo touchmonitor, the world over, comes with Elo's quality service and dedicated technical support staff.

LCD

DESKTOP MONITORS

12" Desktop LCD (High-end)

SPECIFICATIONS

Model		121C Series
Display size & type		12.1" (30.7 cm) diagonal active matrix color TFT LCD
Optimal resolution		800 x 600 at 60, 72 or 75 Hz (VESA SVGA)
Other supported resolutions		640 x 480 at 60, 72 or 75 Hz (VESA, IBM, VGA)
		640 x 480 at 67 Hz (Mac)
		640 x 480 at 56 or 60 Hz (PC 98)
Brightness	without touchscreen	250 cd/m^2
	with touchscreen	AccuTouch 188 cd/m^2 (typical)
Contrast ratio		100:1
Colors		16.7 million
Dot pitch		0.31 mm
Viewing angle (from center)	left/right	± 50° or 100° total
	up/down	60°/20° or 80° total
Scanning frequency	horizontal	24-50 kHz
	vertical	55-85 Hz
Video bandwidth		50 MHz
Signal		Analog (no proprietary video card needed)
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	9.7" (246 mm)
	vertical	7.3" (185 mm)
Monitor dimensions	width	13.4" (340 mm)
	height	11.3" (287 mm), incl. base (removable base, VESA mounting adaptor available)
	depth	6.7" (170 mm)
Weight (approx.)	actual	10 lbs (5 kg)
	shipping	17 lbs (8.5 kg)
Power		External power supply - 100-240 VAC, 50-60 Hz, 20 W (max.)
Operating temperature		10°C to 40°C
Storage temperature		-20°C to 60°C
Humidity	operating	85% non-condensing
	storage	90% non-condensing
Warranty		1 year monitor, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls, 2 built-in 1 W speakers

ORDERING INFORMATION

ACCUTOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	870141-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.

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LCD

DESKTOP MONITORS

12" Desktop LCD

SPECIFICATIONS

Model		121C Series
Display size & type		12.1" (30.7 cm) diagonal active matrix color TFT LCD
Optimal resolution		800 x 600 at 56 or 60 Hz (VESA SVGA)
Other supported resolutions		640 x 480 at 60, 72, 75 or 80 Hz (VESA, IMB, VGA)
Brightness	without touchscreen	100 cd/m^2
	with touchscreen	AccuTouch 85 cd/m^2 (typical)
Contrast ratio		120: 1
Colors		16,7 million
Dot pitch		0.31 mm
Viewing angle (from center)	left/right	± 40° or 80° total
	up/down	10°/30° or 40° total
Scanning frequency	horizontal	31.5-43.3 kHz
	vertical	56-85 Hz
Video bandwidth		50 Mhz
Signal		Analog (no proprietary video card needed)
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	9.7" (246 mm)
	vertical	7.3" (185 mm)
Monitor dimensions	width	13.4" (340 mm)
	height	12.8" (325 mm) (removable base)
	depth	6.5" (166 mm)
Weight (approx.)	actual	7.7 lbs (3.5 kg)
	shipping	13.2 lbs (6.5 kg)
Power		External power supply - 100-240 VAC, 50-60 Hz, 20 W (max.)
Operating temperature		0°C to 40°C
Storage temperature		-25°C to 60°C
Humidity	operating	85% humidity
	storage	90% humidity
Warranty		1 year monitor, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls

ORDERING INFORMATION

AccuTouch

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	392863-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
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LCD

DESKTOP MONITORS

15" Desktop LCD (Philips-based)

SPECIFICATIONS

Model		151C Series
Display size & type		15.1" (38.4 cm) diagonal active matrix color TFT LCD
Optimal resolution		1024 x 768 at 60-75 Hz (XGA)
Other supported resolutions		640 x 480 at 60-75 Hz
		800 x 600 at 60-75 Hz
Brightness	without touchscreen	200 cd/m^2
	with touchscreen	IntelliTouch: 185 cd/m^2 ; AccuTouch: 150 cd/m^2 (typical)
Contrast ratio		300:1
Colors		262,000
Dot pitch		0.30 mm
Viewing angle (from center)	left/right	± 80° or 160° total
	up/down	55°/60° or 115° total
Scanning frequency	horizontal	30-61 kHz
	vertical	56-75 Hz
Video bandwidth		80 MHz
Signal		Analog (no proprietary video card needed)
Signal connector		Mini D-Sub 15-Pin (female) ; Universal Mac adapter available separately
Display area dimensions	horizontal	12.1" (307 mm)
	vertical	9.1" (230 mm)
Monitor dimensions	width	15.1" (402 mm)
	height	15.0" (418 mm), incl. base (removable base, VESA mounting adaptor available)
	depth	6.9" (176 mm)
Weight (approx.)	actual	12 lbs (6 kg)
	shipping	19 lbs (9.5 kg)
Power		100-240 VAC, 50-60 Hz ± 3 Hz, 40 W (max.)
Operating temperature		5°C to 40°C
Storage temperature		-41°C to 60°C
Humidity (operating and storage)		95% max.
Warranty		1 year monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls, 2 built-in 1 W speakers, microphone
		VESA DDC 1/2B Plug and Play, VESA Adapter kit for swivel arms and wall mount on demand

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INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal serial	Antiglare	552345-000	UL, cUL, FCC Class A, CE, TÜV
AccuTouch	Internal USB	Antiglare	036759-000	UL, cUL, FCC Class A, CE, TÜV
IntelliTouch	Internal serial	Antiglare	237095-000	UL, cUL, FCC Class A, CE, TÜV
IntelliTouch	Internal USB	Antiglare	435865-000	UL, cUL, FCC Class A, CE, TÜV

Notes:
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LCD

DESKTOP MONITORS

18" Desktop LCD

SPECIFICATIONS

Model		181C Series
Display size & type		18.1" (46cm) diagonal active matrix color TFT LCD
Optimal resolution		1280 x 1024 at 60 Hz (SXGA)
Other supported resolutions		640 x 480, 800 x 600, 832 x 624, 1152 x 900
Brightness	without touchscreen	200 cd/m^2
	with touchscreen	IntelliTouch 185 cd/m^2 (typical)
Contrast ratio		150: 1
Colors		unlimited
Dot pitch		0.28 mm
Viewing angle (from center)	left/right	± 80° (1:10) or 160° total
	up/down	± 80° (1:10) or 160° total
Scanning frequency	horizontal	24.8-80 kHz
	vertical	56.2-85.1Hz
Video bandwidth		n/a
Signal		Analog (no proprietary video card needed)
Signal connector		Mini D-Sub 15-Pin (female), 5 x BNC, Universal Mac adapter available separately
Display area dimensions	horizontal	14.1" (359 mm)
	vertical	11.3" (287 mm)
Monitor dimensions	width	17.7" (450 mm)
	height	22.1" (560 mm) (removable base, VESA mounting adaptor available)
	depth	9.9" (252 mm)
Weight (approx.)	actual	18 lbs (9 kg)
Power		100-240 VAC, 50-60 Hz, 77 W (max.)
Operating temperature		5°C to 35°C
Humidity (operating and storage)		80% max.
Warranty		1 year monitor, 10 years IntelliTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls
		VESA DDC 1/2B Plug and Play
		Prepared for VESA mounting (100 mm x 100 mm)
		Front bezel is sealed to protect against splashed liquids, dirt and dust

ORDERING INFORMATION

INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
IntelliTouch	Internal Serial	Antiglare	857199-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.

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12"/15"/18" Front Mount (Panel Mount) Kiosk LCD

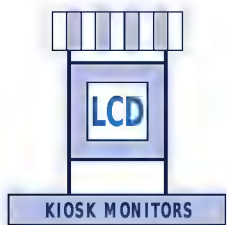| SPECIFICATIONS	12.1"	15"	18"
Model	121P	151P	181P
Display size	12.1" (31.50 cm) diagonal	15" (38.1 cm) diagonal	18.1" (45.9 cm) diagonal
Display type	Active matrix color TFT LCD	Active matrix color TFT LCD	Active matrix color TFT LCD
Useful screen area	9.7" (246 mm) H	12.0" (304 mm) H	14.1" (359 mm) H
	7.5" (185 mm) V	9.0" (228 mm) V	11.3" (287 mm) V
Pixel format	800 x 600 (SVGA)	1024 x 768 (XGA)	1280 x 1024 (SXGA)
Vertical scanning frequency	56-85 Hz	56-85 Hz	55-120 Hz
Colors	16 million with dithering	16 million with dithering	16 million with dithering
Brightness without touchscreen	270 cd/m²	200 cd/m²	200 cd/m²
with touchscreen	IT 255 cd/m² (typical)	IT 190 cd/m² (typical)	IT 190 cd/m² (typical)
Viewing angle horizontal	± 70° or 140° total	± 70° or 140° total	± 70° or 140° total
vertical	± 55° or 110° total	± 60° or 120° total	± 55 or 110° total
Contrast ratio	300:1	300:1	150:1
Operating temperature	0°C to 35°C	0°C to 35°C	0°C to 45°C
Storage temperature	-25°C to 60°C	-25°C to 60°C	-25°C to 60°C
Humidity	95% non-condensing	95% non-condensing	95% non-condensing
Video connector	Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)
Touchscreen connector	RS-232 DB-9 (female)	RS-232 DB-9 (female)	RS-232 DB-9 (female)
Input video	VGA/SVGA analog	VGA/SVGA/XGA analog	VGA/SVGA/XGA/SXGA analog
Input power	100-240 VAC,	100-240 Hz VAC,	100-240 Hz VAC,
	50/60 Hz Universal	50/60 Hz Universal	50/60 Hz Universal
	(internal power supply)	(internal power supply)	(internal power supply)
Power dissipation	35 W at max. brightness	40 W at max. brightness	55 W at max. brightness
Backlight lamp life	30,000 hours at full brightness	25,000 hours at full brightness	50,000 hours at full brightness
Weight (approx.) actual	12.5 lbs (6 kg)	14.5 lbs (7 kg)	16 lbs (8 kg)
shipping	19.5 lbs (9.5 kg)	21.5 lbs (10 kg)	22.5 lbs (10.5 kg)
Warranty	1 year monitor, 10 years IntelliTouch/SecureTouch screen, 5 years touch controller		
Additional features	Remote OSD module	Remote OSD module	

ORDERING INFORMATION

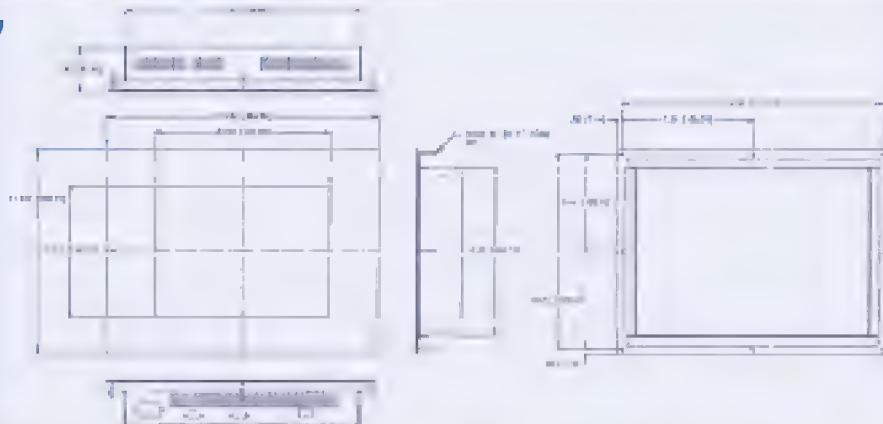| Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
12.1"	IntelliTouch	Internal Serial+ USB	Antiglare	734155-000	UL, cUL, FCC Class A, CE, TÜV-GS
12.1"	SecureTouch 6mm	Internal Serial+ USB	Antiglare	577589-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	IntelliTouch	Internal Serial+ USB	Antiglare	707195-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	SecureTouch 6mm	Internal Serial+ USB	Antiglare	577503-000	UL, cUL, FCC Class A, CE, TÜV-GS
18.1"	IntelliTouch	Internal Serial	Antiglare	845997-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
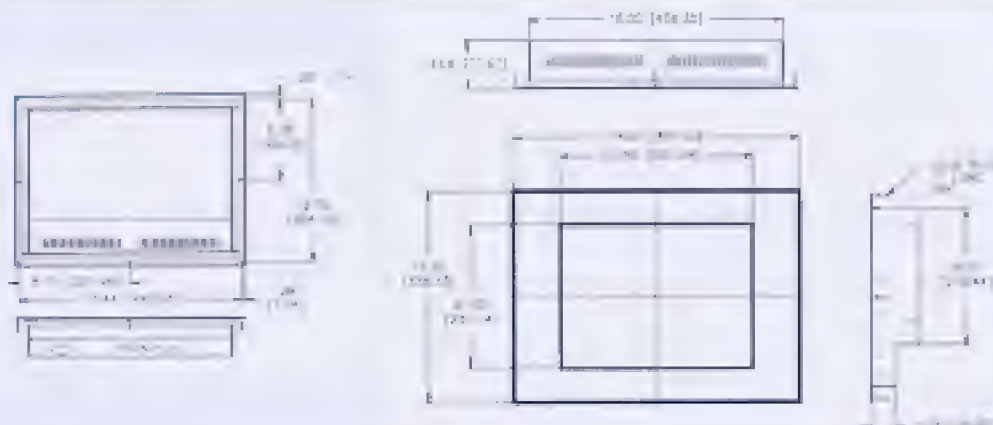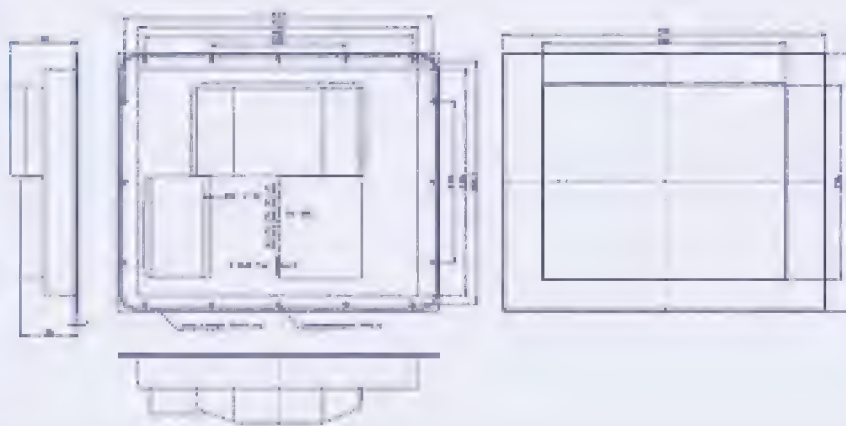- All models, prices and availability subject to change without notice.

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LCD

KIOSK MONITORS

12"

15"

18"

ēlo
TOUCHSYSTEMS

12"/15"/18" Rear Mount Kiosk LCD

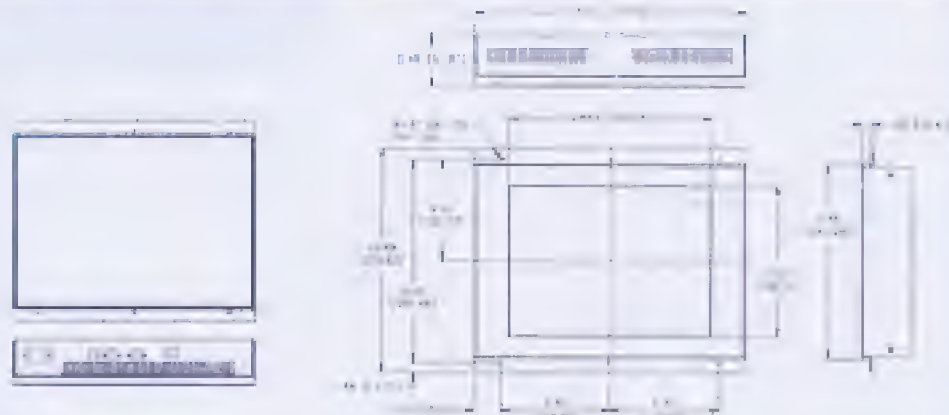| SPECIFICATIONS		12.1"	15"	18"
Model		121R	151R	181R
Display size		12.1" (31.50 cm) diagonal	15" (38.1 cm) diagonal	18.1" (45.9 cm) diagonal
Display type		Active matrix color TFT LCD	Active matrix color TFT LCD	Active matrix color TFT LCD
Useful screen area		9.7" (246 mm) H	12.0" (304 mm) H	14.1" (359 mm) H
		7.5" (185 mm) V	9.0" (228 mm) V	11.3" (287 mm) V
Pixel format		800 x 600 (SVGA)	1024 x 768 (SGA)	1280 x 1024 (SXGA)
Vertical scanning frequency		56-85 Hz	56-85 Hz	50-120 Hz
Colors		16 million with dithering	16 million with dithering	16 million with dithering
Brightness	without touchscreen	270 cd/m²	200 cd/m²	200 cd/m²
	with touchscreen	IT 255 cd/m² (typical)	IT 190 cd/m² (typical)	IT 190 cd/m² (typical)
Viewing angle	horizontal	± 70° or 140° total	± 70° or 140° total	± 70 or 140° total
	vertical	± 55° or 110° total	± 60° or 120° total	± 55° or 110° total
Contrast ratio		300: 1	300: 1	150: 1
Operating temperature		0°C to 35°C	0°C to 35°C	0°C to 45°C
Storage temperature		-25°C to 60°C	-25°C to 60°C	-25°C to 60°C
Humidity		95% non-condensing	95% non-condensing	95% non-condensing
Video connector		Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)
Touchscreen connector		RS-232 DB-9 (female)	RS-232 DB-9 (female)	RS-232 DB-9 (female)
Input video		VGA/SVGA	VGA/SVGA/XGA	VGA/SVGA/XGA/SXGA
		analog	analog	analog
Input power		100-240 VAC,	100-240 VAC,	100-240 VAC,
		50/60 Hz universal	50/60 Hz universal	50/60 Hz universal
		(internal power supply)	(internal power supply)	(internal power supply)
Power dissipation		35 W at max. brightness	40 W at max. brightness	55 W at max. brightness
Backlight lamp life		30,000 hours	25,000 hours	50,000 hours
		at full brightness	at full brightness	at full brightness
Weight (approx.)	actual	11 lbs (5.5 kg)	15.8 lbs (7.5 kg)	16 lbs (8 kg)
	shipping	17.5 lbs (8.5 kg)	21.5 lbs (10.5 kg)	24 lbs (12 kg)
Warranty		1 year monitor, 10 years IntelliTouch/SecureTouch screen, 5 years touch controller		
Additional features		Remote OSD module	Remote OSD module	

ORDERING INFORMATION

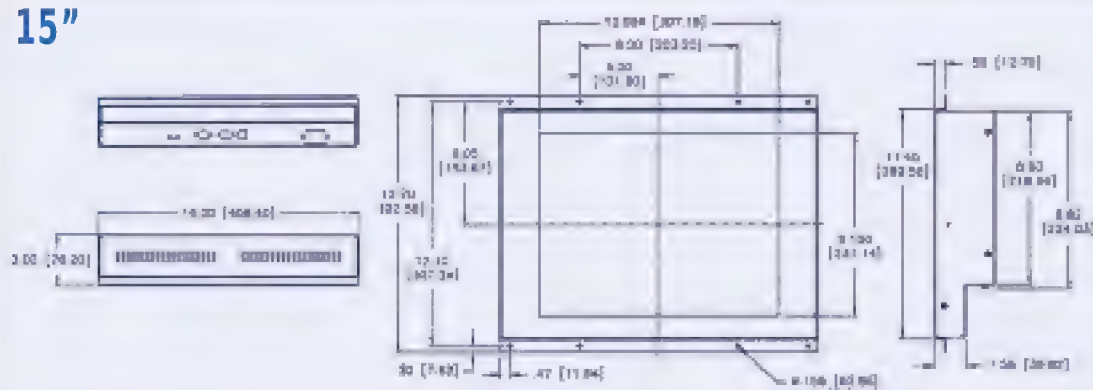| Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
12.1"	IntelliTouch	Internal Serial+ USB	Antiglare	207319-000	UL, cUL, FCC Class A, CE, TÜV-GS
12.1"	SecureTouch 6mm	Internal Serial+ USB	Antiglare	094613-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	IntelliTouch	Internal Serial+ USB	Antiglare	965283-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	SecureTouch 6mm	Internal Serial+ USB	Antiglare	611475-000	UL, cUL, FCC Class A, CE, TÜV-GS
18.1"	IntelliTouch	Internal Serial	Antiglare	557877-000	CE

Notes:
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- All models, prices and availability subject to change without notice.

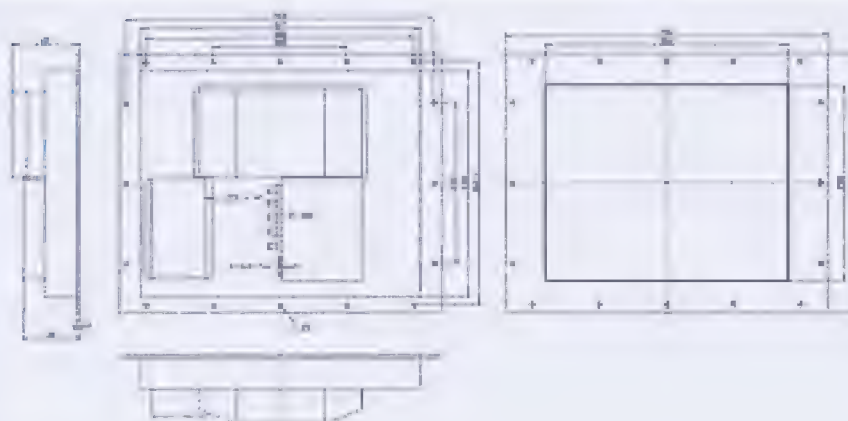**Elo TouchSystems Belgium** + 32 (16) 35 21 00 • **Elo TouchSystems Germany** + 49 (89) 60 82 20 • www.elotouch.com

LCD

KIOSK MONITORS

12"

15"

18"

elo
TOUCHSYSTEMS
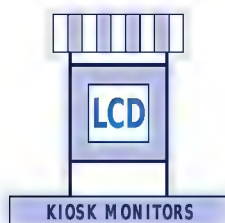
12"/15" Front Mount (Panel Mount) Industrial LCD

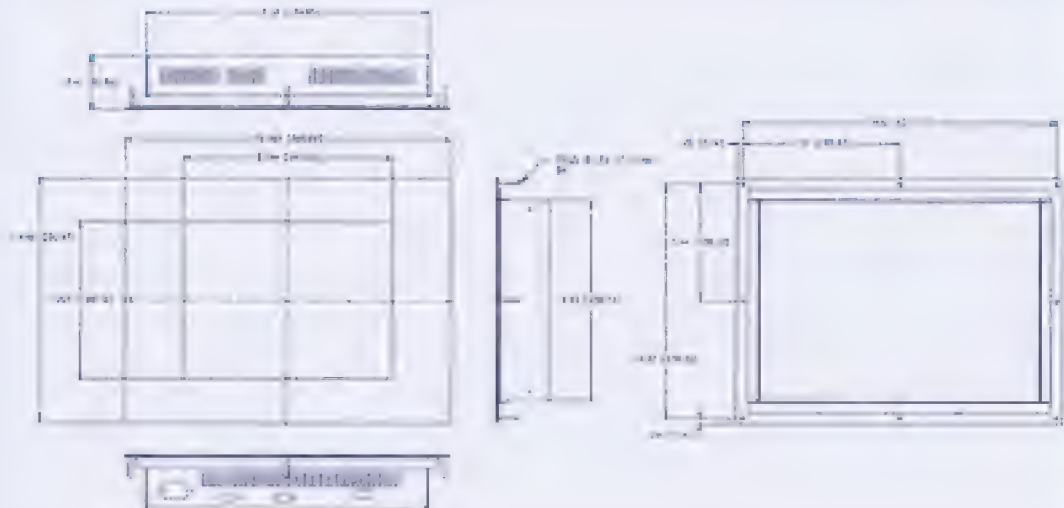| SPECIFICATIONS	12.1"	15"
Model	121P	151P
Display size	12.1" (31.5 cm) diagonal	15" (38.1 cm) diagonal
Display type	Active matrix color TFT LCD	Active matrix color TFT LCD
Useful screen area	9.7" (246 mm) H	12.0" (304 mm) H
	7.5" (185 mm) V	9.0" (228 mm) V
Pixel format	800 x 600 (SVGA)	1024 x 768 (XGA)
Vertical scanning frequency	56-85 Hz	56-85 Hz
Colors	16 million with dithering	16 million with dithering
Brightness without touchscreen	270 cd/m^2	200 cd/m^2
with touchscreen	AccuTouch 255 cd/m^2 (typical)	AccuTouch 190 cd/m^2 (typical)
Viewing angle horizontal	± 70° or 140° total	± 70° or 140° total
vertical	± 55° or 100° total	± 60° or 120° total
Contrast ratio	300: 1	300: 1
Operating temperature	0°C to 35°C	0°C to 35°C
Storage temperature	-25°C to 60°C	-25°C to 60°C
Humidity	95% non-condensing	95% non-condensing
Video connector	Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)
Touchscreen connector	RS-232 DB-9 (female)	RS-232 DB-9 (female)
Input video	VGA/SVGA analog	VGA/SVGA/XGA analog
Input power	100-240 Hz VAC,	100-240 Hz VAC,
	50/60 Hz Universal	50/60 Hz Universal
	(internal power supply)	(internal power supply)
Power dissipation	35 W at max. brightness	40 W at max. brightness
Backlight lamp life	30,000 hours at full brightness	25,000 hours at full brightness
Weight (approx.) actual	12 lbs (6 kg)	14 lbs (7 kg)
shipping	19 lbs (9.5 kg)	21 lbs (10.5 kg)
Warranty	1 year monitor, 5 years AccuTouch screen, 5 years touch controller	
Additional features	Remote OSD module	Remote OSD module

ORDERING INFORMATION

AccuTouch

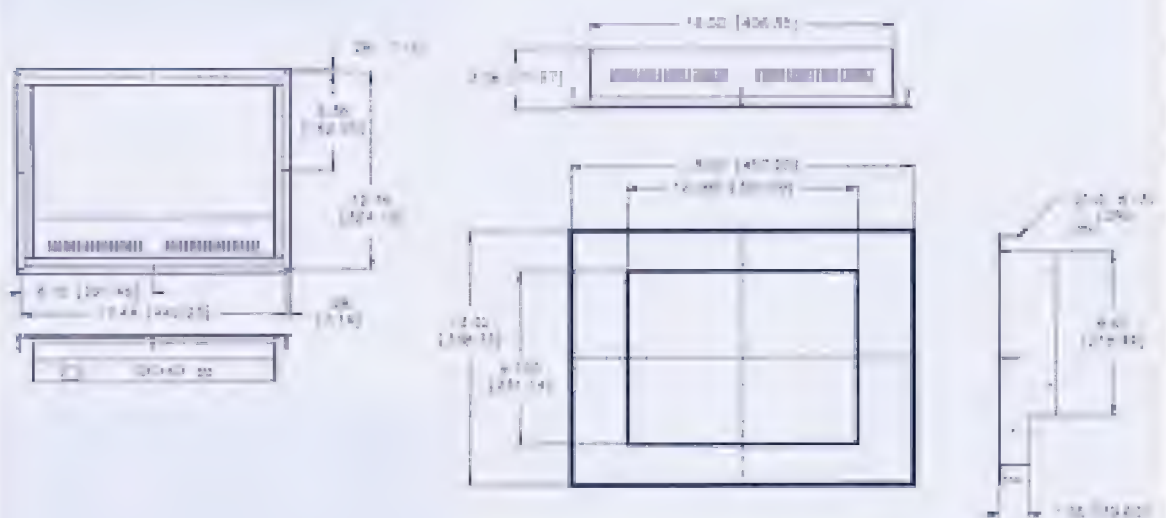| Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
12.1"	AccuTouch	Internal Serial+ USB	Antiglare	947307-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	AccuTouch	Internal Serial+ USB	Antiglare	414205-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
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LCD

INDUSTRIAL MONITORS

12"

15"

TOUCHSYSTEMS

12"/15" Rear Mount Industrial LCD

SPECIFICATIONS	12.1"	15"
Model	121R	151R
Display size	12.1" (31.5 cm) diagonal	15" (38.1 cm) diagonal
Display type	Active matrix color TFT LCD	Active matrix color TFT LCD
Useful screen area	9.7" (246 mm) H	12.0" (304 mm) H
	7.5" (185mm) V	9.0" (228 mm) V
Pixel format	800 x 600 (SVGA)	1024 x 768 (XGA)
Vertical scanning frequency	56-85 Hz	56-85 Hz
Colors	16 million with dithering	16 million with dithering
Brightness without touchscreen	270 cd/m^2	200 cd/m^2
with touchscreen	AccuTouch 200 cd/m^2 (typical)	AccuTouch 150 cd/m^2 (typical)
Viewing angle horizontal	± 70° or 140° total	± 70° or 140° total
vertical	± 55° or 110° total	± 60° or 120° total
Contrast ratio	300: 1	300: 1
Operating temperature	0°C to 35°C	0°C to 35°C
Storage temperature	-25°C to 60°C	-25°C to 60°C
Humidity	95% non-condensing	95% non-condensing
Video connector	Mini D-Sub 15-pin (female)	Mini D-Sub 15-pin (female)
Touchscreen connector	RS-232 DB-9 (female)	RS-232 DB-9 (female)
Input video	VGA/SVGA analog	VGA/SVGA/XGA analog
Input power	100-240 VAC,	100-240 VAC,
	50/60 Hz universal	50/60 Hz universal
	internal power supply	internal power supply
Power dissipation	35 W at max. brightness	40 W at max. brightness
Backlight lamp life	30,000 hours at full brightness	25,000 hours at full brightness
Warranty	1 year monitor, 5 years AccuTouch screen, 5 years touch controller	
Weight (approx.) actual	9.5 lbs (4.5 kg)	14 lbs (7 kg)
shipping	17 lbs (17.5 kg)	21 lbs (10.5 kg)
Additional features	Remote OSD module	Remote OSD module

ORDERING INFORMATION

AccuTouch

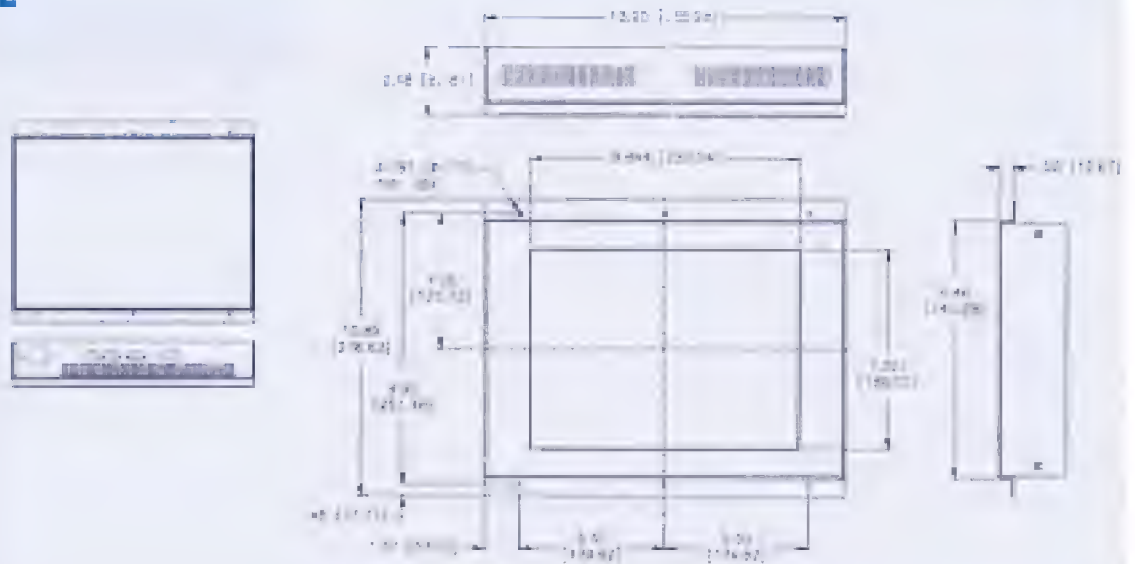| Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
12.1"	AccuTouch	Internal Serial+ USB	Antiglare	242735-000	UL, cUL, FCC Class A, CE, TÜV-GS
15.0"	AccuTouch	Internal Serial+ USB	Antiglare	250075-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
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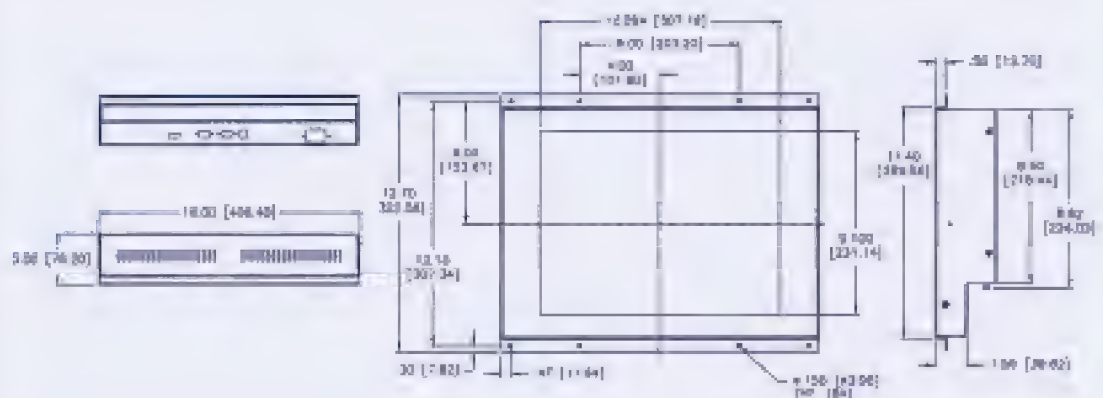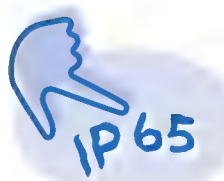- All models, prices and availability subject to change without notice.

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INDUSTRIAL MONITORS

12"

15"

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10"/12"/15" Front Mount (Panel Mount) Industrial LCD

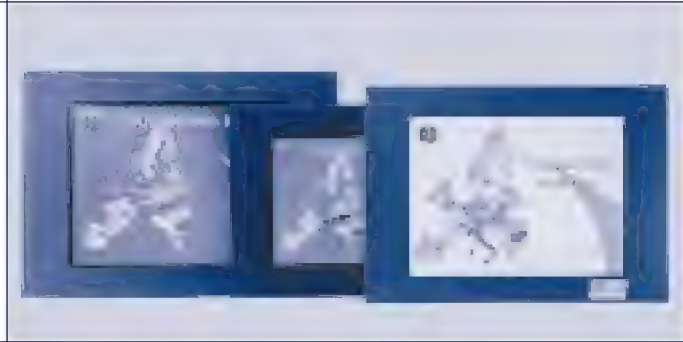| SPECIFICATIONS	10.4"	12.1"	15.1"
Model	104R/IP65	121R/IP65	151R/IP65
Display size	10.4" (26.42 cm) diagonal	12.1" (31.50 cm) diagonal	15" (38.1 cm) diagonal
Display type	Active matrix color TFT LCD	Active matrix color TFT LCD	Active matrix color TFT LCD
Useful screen area	8.3" (211 mm) H	9.7" (246 mm) H	12.0" (304 mm) H
	6.2" (158 mm) V	7.5" (185 mm) V	9.0" (228 mm)
Pixel format	640 x 480 (VGA)	800 x 600 (SVGA)	1024 x 768 (XGA)
Vertical scanning frequency	60-70 Hz	56 Hz	60-75 Hz
Colors	262,000	262,000	262,000
Brightness without touchscreen	200 cd/m^2	270 cd/m^2	200 cd/m^2
with touchscreen	AT 150 cd/m^2 (typical)	AT 200 cd/m^2 (typical)	AT 150 cd/m^2 (typical)
Viewing angle horizontal	± 70° or 140° total	+ 70° or 140° total	+ 70° or 140° total
vertical	+ 70/-40° or 110° total	+ 55° or 110° total	+ 60° or 120° total
Contrast ratio	100: 1	300: 1	250: 1
Operating temperature	0°C to 40°C	0°C to 40°C	0°C to 40°C
Storage temperature	-25°C to 60°C	-25°C to 50°C	-25°C to 60°C
Humidity	95% non-condensing	95% non-condensing	95% non-condensing
Video connector	Mini D-sub 15-pin (female)	Mini D-sub 15-pin (female)	Mini D-sub 15-pin (female)
Touchscreen connector	RS-232 DB-9 (female)	RS-232 DB-9 (female)	RS-232 DB-9 (female)
Input video	VGA analog	VGA/SVGA analog	VGA/SVGA/XGA analog
Input power	100-240 VAC,	100-240 VAC,	100-240 VAC,
	50-60 Hz universal	50-60 Hz universal	50-60 Hz universal
	external power supply to 10-14 Vdc	external power supply to 10-14 Vdc	external power supply to 10-14 Vdc
Power dissipation	18 W at max. brightness	18 W at max. brightness	30 W at max. brightness
Backlight lamp life	25,000 hours	30,000 hours	25,000 hours
	at full brightness	at full brightness	at full brightness
Weight (approx.)	14 lbs (7 kg)	14 lbs (7 kg)	14 lbs (7 kg)
Warranty	1 year monitor, 5 years AccuTouch screen, 5 years touch controller		
Additional features	front IP65 sealed	front IP65 sealed	front IP65 sealed
		removable front bezel as option for OEM customers	

ORDERING INFORMATION

Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
10.4"	AccuTouch	Internal Serial	Antiglare	863811-000	CE
12.1"	AccuTouch	Internal Serial	Antiglare	958277-000	CE
15.1"	AccuTouch	Internal Serial	Antiglare	379635-000	CE

Notes:
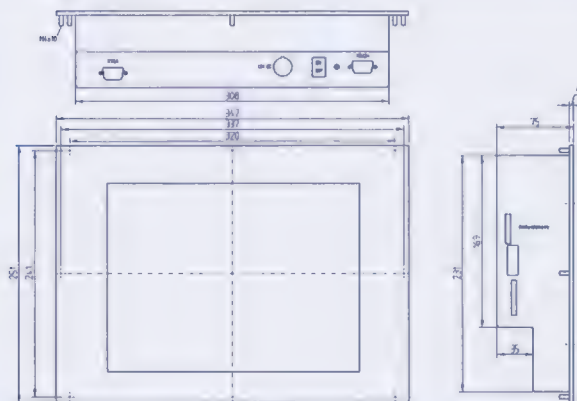- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
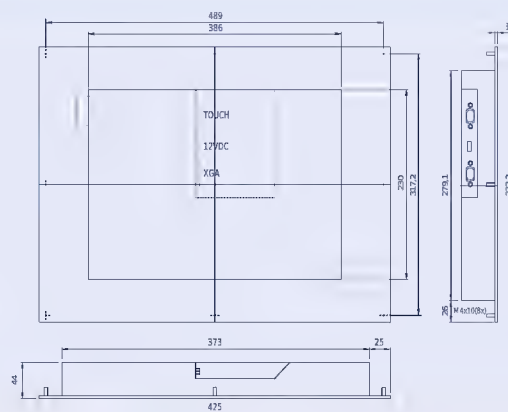- All models, prices and availability subject to change without notice.

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LCD

INDUSTRIAL MONITORS

10"

12"

15"

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CRT

DESKTOP MONITORS

Now also in dark grey
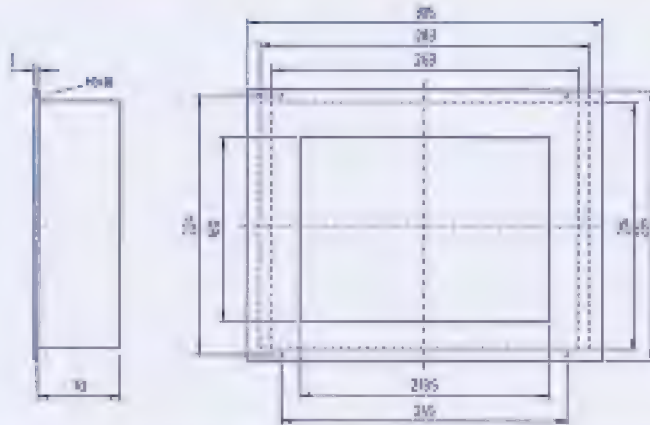
14" Desktop CRT

SPECIFICATIONS

Model		140C Series
Display size & type		14" (35.56 cm), 13.2" viewable (33,59 cm), spherical CRT
Dot pitch		0.28 mm
Resolution presets		720 x 400 at 70 Hz
		640 x 480 at 62, 72 or 75 Hz
		800 x 600 at 56, 60, 72, 75 or 85 Hz
		1024 x 768 at 60 Hz NI or 87 Hz interlaced
Scanning frequency	horizontal	30-54 kHz
	vertical	50-120 Hz
Video bandwidth		65 MHz
Signal connector		Mini D-Sub 15-Pin (female) ; Universal Mac adapter available separately
Display area dimensions	horizontal	9.8" (250 mm)
	vertical	7.3" (185 mm)
Monitor dimensions	width	13.8" (350 mm)
	height	13.9" (353 mm), incl. base
	depth	14.8" (377 mm)
Weight (approx.)	actual	24 lbs (12 kg)
	shipping	30 lbs (15 kg)
Power		100-240 VAC, 50/60 Hz, 75 W (max.)
Warranty		2 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls
		VESA DPMS
		VESA DDC 1/2B Plug and Play
		Front bezel is sealed to protect against splashed liquids, dirt and dust

ORDERING INFORMATION

AccuTouch
IntelliTouch

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal serial	Antiglare	528547-000	UL, cUL, FCC Class A, CE, TÜV-GS
AccuTouch	Internal USB	Antiglare	396665-000	UL, cUL, FCC Class A, CE, TÜV-GS
IntelliTouch	Internal serial	Antiglare	704777-000	UL, cUL, FCC Class A, CE, TÜV-GS
Dark grey plastic housing :				
AccuTouch	Internal Serial	Antiglare	707421-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS
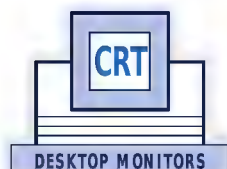
14" Desktop CRT (Philips-based)

SPECIFICATIONS

Model		P104B Series
Display size & type		14" (35.6 cm), 13.2" viewable (33.5 cm), spherical CRT
Dot pitch		0.28 mm
Resolution presets		640 x 480 at 70 or 75 Hz
		800 x 600 at 75 or 85 Hz
		1024 x 768 at 60 Hz NI
Scanning frequency	horizontal	30-54 kHz
	vertical	50-120 Hz
Video bandwidth		65 MHz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	250 mm typ./274 mm max.
	vertical	188 mm typ./201 mm max.
Monitor dimensions	width	16.5" (420 mm)
	height	15.7" (400 mm), incl. base
	depth	16.9" (430 mm)
Weight (approx.)		22 lbs (11 kg)
Power		100-264 VAC, 50-60 Hz, 72 W (max.)
Warranty		3 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital monitor display controls
		MPR II
		Energy Star
		Front bezel is sealed to protect against splashed liquids, dirt and dust

ORDERING INFORMATION

ACCUTOUCH
INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	820321-000	CE
IntelliTouch	Internal Serial	Antiglare	666837-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS
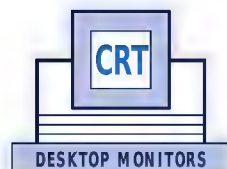
15" Desktop CRT

SPECIFICATIONS

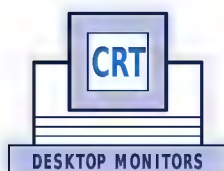|		
Model		150C Series
Display size & type		15" (38.10 cm), 13.8" viewable (35.05 cm), FST CRT
Dot pitch		0.28 mm
Resolution presets		1280 x 1024 at 65 Hz (PC) Maximum
		1024 x 768 at 85 Hz (PC) Recommended
		1024 x 768 at 75 Hz (Mac) Recommended
Scanning frequency	horizontal	30-69 kHz
	vertical	48-125 Hz
Video bandwidth		110 MHz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	260 mm typ./277 mm max.
	vertical	195 mm typ./208 mm max.
Monitor dimensions	width	15.0" (381 mm)
	height	14.8" (376 mm) (removable base)
	depth	16.5" (419 mm)
Weight (approx.)	actual	28 lbs (14 kg)
	shipping	35 lbs (17.5 kg)
Power		90-264 VAC, 50-60 Hz, 75 W (max.)
Warranty		2 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls
		MPR II
		Energy Star
		VESA DPMS/NUTEK
		VESA DDC
		1/2B Plug and Play
		ISO 9241/3

ORDERING INFORMATION

AccuTouch
IntelliTouch

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	933985-000	UL, cUL, FCC Class A, CE, TÜV-GS
AccuTouch	Internal USB	Antiglare	032467-000	UL, cUL, FCC Class A, CE, TÜV-GS
IntelliTouch	Internal Serial	Antiglare	727559-000	UL, cUL, FCC Class A, CE, TÜV-GS
IntelliTouch	Internal USB	Antiglare	349113-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS

New version in preparation

15" Desktop CRT (Philips-based)

SPECIFICATIONS

Model		P105B Series
Display size & type		15" (38.1 cm), 13.8" viewable (35 cm), FST CRT
Dot pitch		0.28 mm
Resolution presets		640 x 480 at 70 or 85 Hz
		800 x 600 at 75 or 85 Hz
		1024 x 768 at 75 or 85 Hz
Scanning frequency	horizontal	30-70 kHz
	vertical	50-160 Hz
Video bandwidth		108 MHz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	270 mm typ./280 mm max.
	vertical	202 mm typ./210 mm max.
Monitor dimensions	width	15" (382 mm)
	height	392 mm, incl. base
	depth	424 mm
Weight (approx.)		28 lbs (14 kg)
Power		195-264 VAC, 50-60 Hz, 80 W (max.)
Warranty		3 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Digital on-screen display controls
		MPR II
		Energy Star
		VESA DDC 1/2B Plug and Play
		Software display controls
		Front bezel is sealed to protect against splashed liquids, dirt and dust

ORDERING INFORMATION

ACCUTOUCH
INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	310457-000	CE
IntelliTouch	Internal Serial	Antiglare	716293-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS
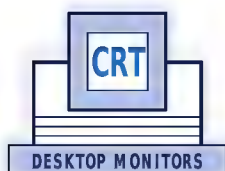
17" Desktop CRT

SPECIFICATIONS

Model		170C Series
Display size & type		17" (43.18 cm), 15.8" viewable (40.13 cm), FST CRT
Dot pitch		0.27 mm
Resolution presets		1280 x 1024 at 65 Hz (PC) Maximum
		1024 x 768 at 85 Hz (PC) Recommended
		1024 x 768 at 75 Hz (Mac) Recommended
Scanning frequency	horizontal	30-69 kHz
	vertical	50-120 Hz
Video bandwidth		110 MHz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	300 mm typ./325 mm max.
	vertical	225 mm typ./244 mm max.
Monitor dimensions	width	16.3" (414 mm)
	height	16.3" (414 mm) (removable base)
	depth	17.8" (452 mm)
Weight (approx.)	actual	39 lbs (19.5 kg)
	shipping	46 lbs (23 kg)
Power		90-264 VAC, 60 Hz, 115 W (max.)
Warranty		2 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Easy screen OSD controls
		MPR II
		Energy Star
		VESA DPMS
		VESA DDC
		1/2B Plug and Play
		ISO 9241/3

ORDERING INFORMATION

ACCUTOUCH

INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	063141-000	UL, cUL, FCC Class A, CE, TÜV-GS
AccuTouch	Internal USB	Antiglare	623221-000	UL, cUL, FCC Class A, CE, TÜV-GS
IntelliTouch	Internal Serial	Antiglare	984333-000	UL, cUL, FCC Class A, CE, TÜV-GS
IntelliTouch	Internal USB	Antiglare	581693-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS

New version in preparation
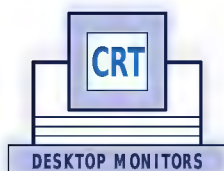
17" Desktop CRT Short-neck (Philips-based)

SPECIFICATIONS

Model		P107B Series 'shorty'
Display size & type		17" (43.2 cm), 15.9" viewable (40.4 cm), FST CRT
Dot pitch		0.26 mm
Resolution presets		640 x 480 at 70, 75 and 85 Hz
		800 x 600 at 75 and 85 Hz
		1024 x 768 at 75 and 85 Hz
		1280 x 960 at 85 Hz
		1280 x 1024 at 75 Hz
Scanning frequency	horizontal	30-86 kHz
	vertical	50-160 Hz
Video bandwidth		148.5 MHz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately
Display area dimensions	horizontal	306 mm typ./326 mm max.
	vertical	230 mm typ./244 mm max.
Monitor dimensions	width	411 mm
	height	439 mm (incl. base)
	depth	380 mm
Weight (approx.)		34 lbs (17 kg)
Power		90-264 VAC, 50/60 Hz, 85 W (max.)
Warranty		3 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Front bezel is sealed to protect against splashed liquids, dirt and dust
		Digital multilingual on-screen display (OSD)
		Plug and Play compatibility: DDC 1/2B (VESA)
		Software display controls
		MTBF > 75000 hours (excl. CRT)

ORDERING INFORMATION

AccuTouch
IntelliTouch

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal Serial	Antiglare	096627-000	CE
IntelliTouch	Internal Serial	Antiglare	339973-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS
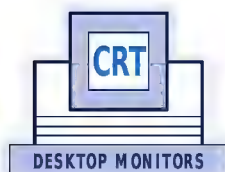
19" Desktop CRT (Philips-based)

SPECIFICATIONS

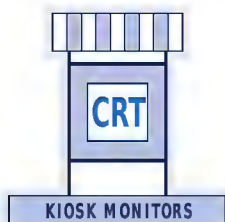|		
Model		P109MP Series
Display size & type		19" (48.3 cm), 17.9" viewable (45.5 cm), FST CRT
Dot pitch		0.26 mm
Resolution presets		640 x 480 at 60 and 75 Hz
		800 x 600 at 75 and 85 Hz
		1024 x 768 at 75 and 85 Hz
		1152 x 870 at 75 Hz (Mac)
		1152 x 900 at 76 Hz (Sun/Sparc)
		1280 x 1024 at 75 and 85 Hz
		1600 x 1200 at 75 and 85 Hz
Scanning frequency	horizontal	30-107 kHz
	vertical	50-160 Hz
Video bandwidth		230 MHz
Signal connector		Mini D-Sub 15-Pin (female), 5-BNC, Universal Mac adapter available separately
Display area dimensions	horizontal	340 mm typ./365.5 mm max.
	vertical	255 mm typ./273 mm max.
Monitor dimensions	width	442 mm
	height	433 mm, excl. pedestal and cable management
	depth	500 mm
Weight (approx.)		50 lbs (25 kg)
Power		90-264 VAC, 50-60 Hz, 110 W (max.)
Warranty		3 years monitor, 10 years IntelliTouch screen, 5 years AccuTouch screen, 5 years touch controller
Additional features		Built-in stereo speakers 2 x 2 W, microphone
		Digital multilingual on-screen display (OSD)
		Plug and Play compatibility: DDC 1/2B (VESA)
		Colorific color management software
		Software display controls
		MTBF > 75000 hours (excl. CRT)
		Front bezel is sealed to protect against splashed liquids, dirt and dust

ORDERING INFORMATION

ACCUTOUCH
INTELLITOUCH

Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
AccuTouch	Internal serial	Antiglare	040617-000	CE
IntelliTouch	Internal serial	Antiglare	864663-000	CE

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
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- Clear touchscreen surface treatment available for larger projects.

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CRT

DESKTOP MONITORS
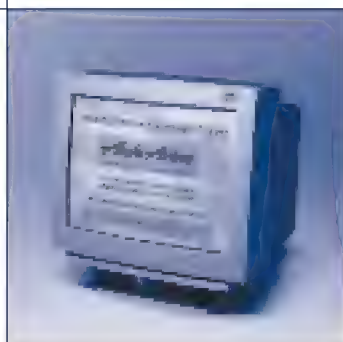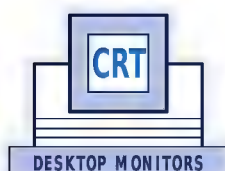
19"/21" Desktop CRT

SPECIFICATIONS		19"	21"
Model		190C Series	210C Series
Display size & type		19" (48.2 cm), 18" viewable (45.7 cm), FST CRT	21" (43.18 cm), 20" viewable (50.8 cm), FST CRT
Dot pitch		0.22 mm	0.22 mm
Resolution presets		640 x 480 at 60 Hz	640 x 480 at 60 Hz
		800 x 600 at 85 Hz	800 x 600 at 85 Hz
		1024 x 768 at 85 Hz	1024 x 768 at 85 Hz
		1280 x 1024 at 85 Hz	1280 x 1024 at 85 Hz
		1600 x 1200 at 75 Hz	1600 x 1200 at 75 Hz
Scanning frequency	horizontal	31-93.75 kHz	31-106.25 kHz
	vertical	50-160 Hz	50-160 Hz
Video bandwidth		200 MHz	230 MHz
Signal connector		Mini D-Sub 15-Pin (female)	Mini D-Sub 15-Pin (female)
		Universal Mac adapter available separately	Universal Mac adapter available separately
Display area dimensions	horizontal	14.44" (367 mm)	15.96" (405 mm)
	vertical	10.87" (276 mm)	12.01" (305 mm)
Monitor dimensions	width	17.6" (447 mm)	19.2" (488 mm)
	height	17.9" (455 mm) (removable base)	18.9" (480 mm) (removable base)
	depth	18.2" (462 mm)	18.5" (470 mm)
Weight (approx.)		55 lbs (27.5 kg)	55 lbs (27.5 kg)
Power		120-240 VAC, 50/60 Hz, 135 W (max.)	120-240 VAC, 50-60 Hz, 145 W (max.)
Warranty		2 years	2 years
Additional features		Digital on-screen display controls	Digital on-screen display controls
		Front bezel is sealed to protect against	Front bezel is sealed to protect against
		splashed liquids, dirt and dust	splashed liquids, dirt and dust

ORDERING INFORMATION

ITOUCH

| Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
19"	iTouch	Internal serial	Antireflective	608501-000	UL, cUL, FCC Class B, CE, TÜV-GS
21"	iTouch	Internal serial	Antireflective	360793-000	UL, cUL, FCC Class B, CE, TÜV-GS

Notes:
- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

TOUCHSYSTEMS

CRT

KIOSK MONITORS

15"/17" Rear Mount Kiosk CRT

New version in preparation

SPECIFICATIONS		15"	17"
Model		150K Series	170K Series
Display size & type		15" (38.10 cm),	17" (43.18 cm),
		13.7" (34.79 cm) viewable, FST CRT	15.8" (40.13 cm) viewable, FST CRT
Dot pitch		0.28 mm	0.27 mm
Resolution presets		720 x 400 at 70 Hz	720 x 400 at 70 Hz
		640 x 480 at 75 or 85 Hz	640 x 480 at 75 or 85 Hz
		800 x 600 at 75 or 85 Hz	800 x 600 at 75 or 85 Hz
		1024 x 768 at 75 Hz interlaced or 85 Hz NI	1024 x 768 at 75 Hz interlaced or 85 Hz NI
		1280 x 1024 at 60 Hz	1280 x 1024 at 60 Hz
Scanning frequency	horizontal	30-70 kHz	30-70 kHz
	vertical	50-150 Hz	50-150 Hz
Video bandwidth		85 MHz	100 Mhz
Signal connector		Mini D-Sub 15-Pin (female), Universal Mac adapter available separately	
Display area dimensions	horizontal	10.2" (260 mm)	11.8" (300 mm)
	vertical	7.7" (195 mm)	8.9" (225 mm)
External controls		Power, brightness, contrast, H-position, V-position, H-size, V-size, pincushion, trapezoid,	
		parallelogram, rotation, color, temperature, color adjustment, degauss, preset timing, recall	
Weight (approx.)	actual	34.2 lbs (17 kg)	45 lbs (22.5 kg)
	shipping	44 lbs (22 kg)	55 lbs (27.5 kg)
Power		100-240 VAC, 50-60 Hz, 80 W (max.)	100-240 VAC, 50-60 Hz, 90 W (max.)
Operating Temperature		5°C to 35°C	5°C to 35°C
Storage Temperature		-30°C to 60°C	-30°C to 60°C
Humidity	operating	35% to 80% RH, non-condensing	35% to 80% RH, non-condensing
	storage	30% to 85% RH, non-condensing	30% to 85% RH, non-condensing
Warranty		2 years monitor, 10 years IntelliTouch screen, 5 years touch controller	
Additional features		Includes mini-bezel which is sealed to protect against splashed liquids, dirt and dust	
		Special mounting brackets, extra ventilation	
		Digital on-screen display controls	
		MPR II	
		VESA DDC	
		1/2B Plug and Play	

ORDERING INFORMATION

INTELLITOUCH

Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
15"	IntelliTouch	Internal USB	Antiglare	856297-000	UL, cUL, FCC Class A, CE, TÜV-GS
15"	IntelliTouch	Internal Serial	Antiglare	279023-000	UL, cUL, FCC Class A, CE, TÜV-GS
17"	IntelliTouch	Internal USB	Antiglare	164649-000	UL, cUL, FCC Class A, CE, TÜV-GS
17"	IntelliTouch	Internal Serial	Antiglare	035345-000	UL, cUL, FCC Class A, CE, TÜV-GS

Notes:
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- All models, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.

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Elo's kiosk touchmonitors are the industry's first sealed touchmonitors designed specifically for kiosks. With a custom-designed metal chassis and a flat front bezel surface, they offer the ideal solution for kiosks. Elo's kiosk touchmonitors integrate easily into kiosk designs. The flat monitor bezel provides a clean interface with the kiosk enclosure and is sealed to the touchscreen to protect the monitor electronics from splashed liquids, dirt, and dust.

15"

17"

TOUCHSYSTEMS

IP 65
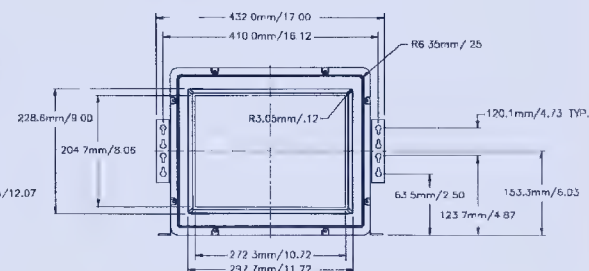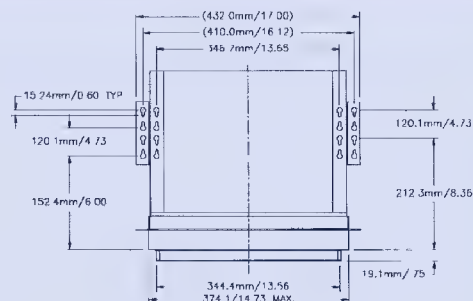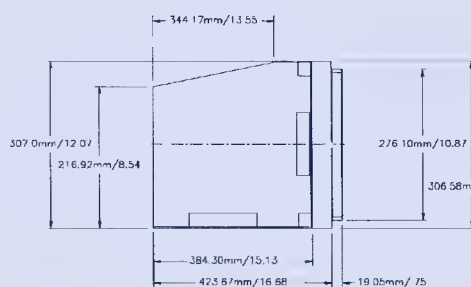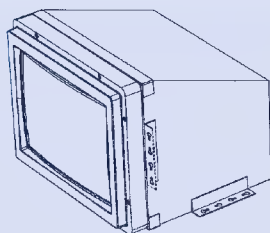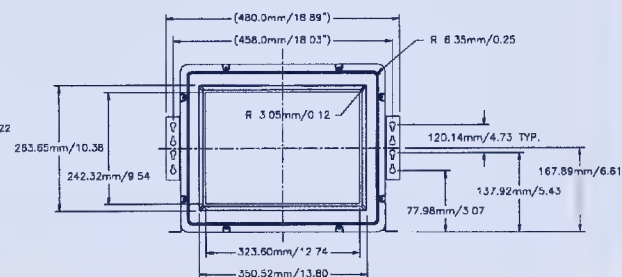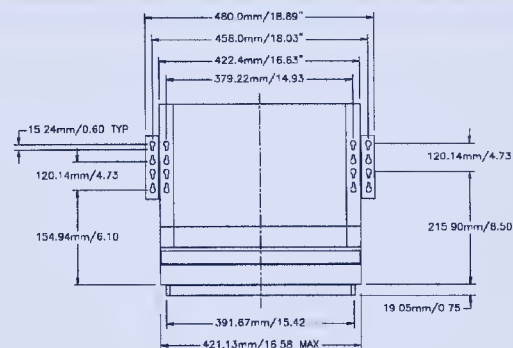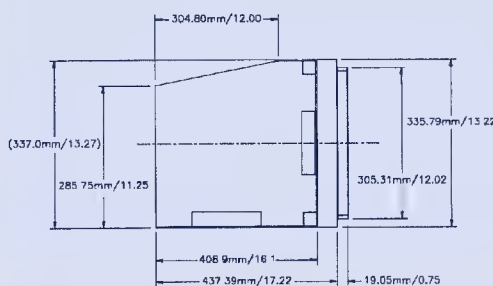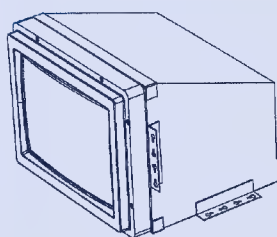
15"/17"/19" Rack Industrial CRT

SPECIFICATIONS	15"	17"	19"
Display size & type	15" (38cm) diagonal	17" (43.2cm) diagonal	19" (48cm) diagonal
	FST CRT	FST CRT	FST CRT
Maximum resolution	1280 x 1024	1600 x 1200	1600 x 1200
Scanning frequency			
horizontal	30-69 kHz	30-95 kHz	30-95 kHz
vertical	50-120 Hz	50-150 Hz	50-150 Hz
Video Bandwidth	80 MHz	135 MHz	135 MHz
Operating temperature	0°C to 50°C	0°C to 50°C	0°C to 50°C
Storage temperature	-20°C to 60°C	-20°C to 60°C	-20°C to 60°C
Humidity	90% non-condensing	90% non-condensing	90% non-condensing
Signal connector		Mini D-Sub 15-Pin (female) and 5XBNC	
Display area dimensions (H x V)	250 x 185 mm	310 x 230 mm	365 x 275 mm
Input power	100-240 VAC	100-240 VAC	90-260 VAC
Weight (approx.)	28 lbs (14 kg)	50 lbs (25 kg)	70 lbs (35 kg)
Warranty		1 year monitor, 5 years AccuTouch screen, 5 years touch controller	
Additional features		IP65 sealed	
		Contact Elo for availability on chassis versions	

ORDERING INFORMATION

AccuTouch

Display Size	Touchscreen Technology	Touchscreen Controller	Surface Treatment	Elo Part Number	Agency Approvals
15" Rack	AccuTouch	Internal Serial	Antiglare	232163-000	CE
17" Rack	AccuTouch	Internal Serial	Antiglare	578497-000	CE
19" Rack	AccuTouch	Internal Serial	Antiglare	058457-000	CE

Notes:
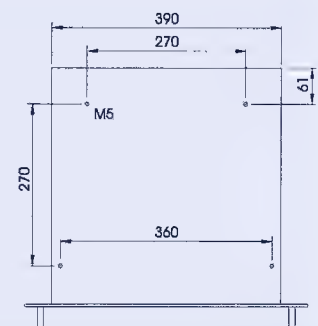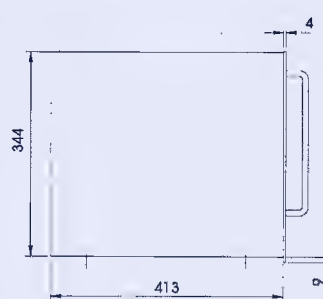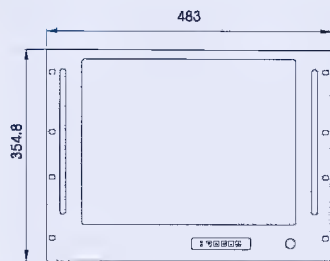- Manuals and software drivers are on the Elo TouchTools CD-ROM included in every delivery or downloadable at www.elotouch.com.
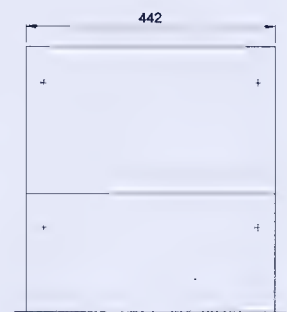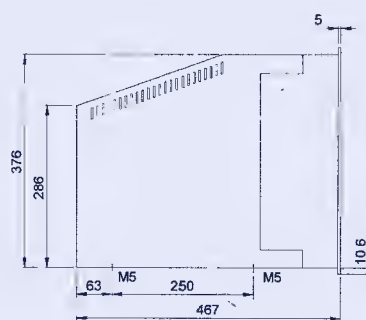- All models, prices and availability subject to change without notice.

ELO TOUCHSYSTEMS

CRT
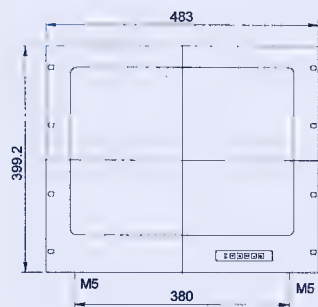
INDUSTRIAL MONITORS

15"

17"

19"

ELO
TOUCHSYSTEMS
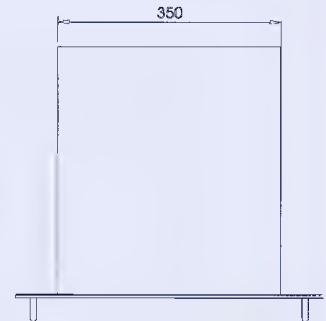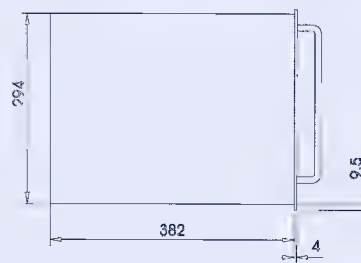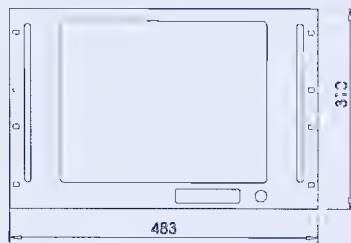
AccuTouch touchscreen sizes

ORDERING INFORMATION • FLAT TOUCHSCREENS (touchscreen thickness approx. 3.6 mm)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: Highlite
6.4"	162	98 x 130	115 x 156	407349-000
7.1"	176	107 x 140	124 x 166	821949-000
7.7"	200	120 x 159	138 x 185	211257-000
8.4"	218	131 x 174	149 x 196	692701-000
9.4"	248	149 x 198	169 x 229	661969-000
9.8"	264	158 x 211	184 x 246	926415-000
10.4"	271	164 x 216	187 x 249	526535-000
11.3"	290	174 x 232	198 x 262	911599-000
12.1"	312	187 x 249	206 x 271	387507-000
13.2"	335	199 x 269	250 x 321	848331-000
13.6"	348	209 x 278	250 x 321	023177-000
13.8"	352	209 x 283	227 x 309	648865-000
14.1"	360	216 x 288	250 x 321	146497-000
14.2"	369	222 x 295	250 x 321	385171-000
15"	384	231 x 307	249 x 333	856093-000
15.1"	387	232 x 310	264 x 356	635661-000
16"	417	261 x 325	288 x 379	284363-000
16.8"	427	254 x 344	288 x 379	799357-000
17.7"	451	271 x 361	289 x 386	531381-000
18.1"	465	291 x 362	309 x 388	767223-000
20.1"	519	325 x 404	355 x 445	937333-000

ORDERING INFORMATION • CURVED TOUCHSCREENS (touchscreen thickness approx. 4.3 mm)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: Highlite
14"	326	193 x 263	248 x 317	028731-000
14"	330	196 x 266	239 x 308	200163-000
15"/FST	342	202 x 276	259 x 324	184825-000
17"/FST	393	235 x 315	297 x 373	496651-000
19"/FST	449	269 x 360	321 x 408	542935-000
19"	489	291 x 392	336 x 438	721895-000
21"	499	300 x 400	348 x 442	001645-000

Notes:
- All products, prices and availability subject to change without notice.
- Custom sizes can be designed for OEM volumes.

IntelliTouch touchscreen sizes

ORDERING INFORMATION • FLAT TOUCHSCREENS (glass thickness approx. 3.2 mm)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: High Resolution Antiglare
6.4"	169	100 x 136	123 x 159	433451-000
8.4"	214 *	130 x 171	179 x 208	518375-000
9.4"	245	144 x 192	176 x 224	072717-000
10.4"	262 *	158 x 211	210 x 252	269259-000
11.3"	286 *	171 x 229	210 x 266	375257-000
12.1"	308 *	184 x 246	222 x 282	497139-000
13.1"	329 *	206 x 257	255 x 310	870693-000
13.8"	350 *	208 x 281	251 x 330	872581-000
14.2"	361 *	217 x 288	272 x 340	119941-000
15"	386 *	232 x 308	277 x 348	094939-000
16.1"	415 *	260 x 324	311 x 375	061863-000
17"	417	253 x 331	290 x 368	027307-000
18.1"	460	287 x 359	333 x 401	057855-000
20.1"	511	320 x 399	363 x 445	061355-000 (clear)
21"	528 *	317 x 422	362 x 472	502833-000 (clear)

ORDERING INFORMATION • SPHERICAL TOUCHSCREENS (glass thickness approx. 3.2 mm)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: High Resolution Antiglare
14"	346	209 x 277	240 x 311	594597-000
15"/FST	350	210 x 279	248 x 314	513873-000
15"/FST	348	208 x 279	248 x 315	329383-000
17"/FST	464	338 x 318	283 x 363	123641-000
19"/FST	455	273 x 364	318 x 406	661457-000
20"	468	276 x 378	335 x 437	093691-000

* Beveled edge for low-profile transducers. Cable routing along touchscreen edge adds maximum of 0.10 inch (3 mm) thickness. Corner-mounted transducers add maximum of 0.030 inch (1 mm) thickness.

Standard touchscreen thickness nominally 0.115 inch (3 mm). Cable routing along touchscreen edge adds maximum of 0.10 inch (3 mm) thickness. Corner-mounted transducers add maximum of 0.150 inch (4 mm) thickness.
Standard cable lengths are 30 inches (762 mm) for curved touchscreens.

Notes:
- All products, prices and availability subject to change without notice.
- Clear touchscreen surface treatment available for larger projects.
- Custom sizes can be designed for OEM volumes.

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IntelliTouch sealing

1. Use only Elo's polyolefin closed-cell sealing foam material ('Volara') with adhesive backing. Only this material has optimum seal/signal absorption characteristics.

VOLARA	WIDTH	THICKNESS		
		0.8 mm	1.6 mm	3.2 mm
	3.2 mm		521701-000	
	4.8 mm	969637-000	206681-000	918987-000
	6.4 mm			839777-000

839777-000 is recommended for integration in CRT monitors
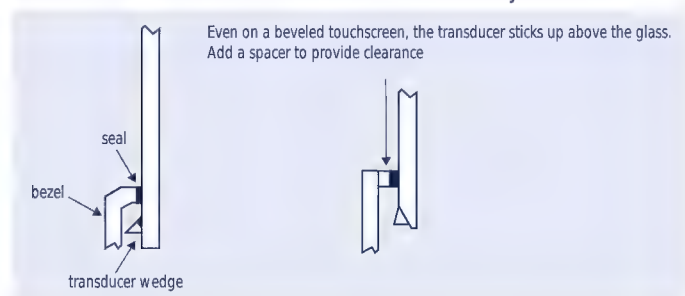521701-000 is recommended for integration in LCD monitors

2. Position the seal just inside the reflector stripes in the active area on the front of the touchscreen.

DO   DON'T
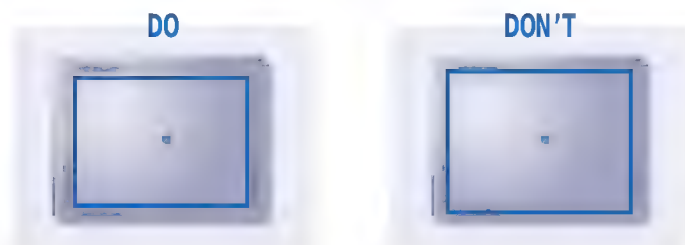
3. The sealing material must be fully compressed all the way around. This provides a splash-proof seal which will not allow liquids to wick behind it. It also creates a stable signal, even if a user presses hard on the bezel.

4. Place the seal flush with the bezel. Do not create a cavity where water and dirt cannot be easily wiped away.

DO   DON'T

5. Also be sure that the transducers are not touched by the bezel.

Even on a beveled touchscreen, the transducer sticks up above the glass. Add a spacer to provide clearance

seal

bezel

transducer wedge

6. Use a single strip of Volara, bending around the corners. Make the seam at the top and score each corner to relieve tension. The adhesive should be on the bezel side.

For more info go to www.elotouch.com/itseal.html

SecureTouch touchscreen sizes

ORDERING INFORMATION • FLAT HEAT-STRENGTHENED GLASS (glass thickness approx. 12 mm, flat)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: Clear
10.4"	264 [1]	158 x 211	217 x 283	939841-000*
12.1"	313 [1]	188 x 250	240 x 302	360253-000*
14.2"	361 [2]	217 x 288	283 x 352	186831-000*
17"	407 [2]	245 x 325	314 x 391	858471-000*

ORDERING INFORMATION • FLAT TEMPERED GLASS (glass thickness approx. 6 mm, flat)

Display Size	Touch Area in mm (diagonal)	Touch Area in mm (h x w)	Outer Dimension in mm (h x w)	Elo Part Number Surface: High Resolution Antiglare
10.4"	264 [1]	158 x 211	198 x 250	582681-000*
12.1"	307 [1]	184 x 246	226 x 286	428565-000*
14.1"	360 [1]	216 x 288	267 x 336	631029-000
15.2"	380	228 x 304	272 x 343	247553-000

* Beveled edge for low-profile transducers. Cable routing along touchscreen edge adds maximum of 0.10 inch (3 mm) thickness. Corner-mounted transducers add maximum of 0.030 inch (1 mm) thickness.
[1] Tempered glass
[2] Heat-strengthened glass

Remark:
SecureTouch touchscreen thickness is nominally 0.47 inch (12 mm) or 0.236 inch (6 mm). Cable routing along touchscreen edge adds maximum of 0.10 inch (3 mm). Glass is beveled under the transducers.

SecureTouch surface wave touchscreens provide rugged yet responsive touch performance for a variety of demanding public-access applications, including:
- Bank cash machines
- Ticketing machines
- Kiosks, especially in unattended locations
- Interactive payphones
- Gaming and amusement machines

SecureTouch touchscreens are made of tough, break-resistant glass that protects your display from vandalism while providing all the performance benefits of Elo's surface wave technology. SecureTouch is designed to take the hard knocks of the real world – scratches, abrasions, impacts – and keep working.

Available on 6 mm tempered and 12 mm heat-strengthened glass, SecureTouch touchscreens exceed the specifications of the UL-1950 Ball Drop Test and offer the ultimate protection in high-threat environments.

Note:
- All products, prices and availability subject to change without notice.

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Elo's controllers

Elo offers several types of controllers for both IntelliTouch and AccuTouch touchscreen applications: a serial controller card which is typically mounted inside the display housing, a PC-Bus card and - new - a USB-controller that connects to the flexible USB-port. The serial controller card is also available in a small enclosure, designed for mounting externally on the back of the display.

AccuTouch controllers

AccuTouch has the most complete controller solutions available. AccuTouch offers a full line of controllers including a single chip, serial, PC-Bus and USB controller. The SmartSet controller family provides the drive signal for the touchscreen, converts the received analog signal into digital touch coordinates, and sends them to the host computer. These controllers offer the fastest touch response in the industry while also providing excellent reliability and proven performance.

The COACh chip

The AccuTouch COACh (Controller On A Chip) is the most cost-effective resistive touchscreen chip available on the market. It is a single chip solution developed with the purpose of allowing users to easily integrate a touch measurement subsystem into custom built hardware configurations. This full featured touchscreen controller is used in Elo's touchscreen controllers and similar in operation to all Elo TouchSystems SmartSet touchscreen controllers. Only a few readily available components are necessary to configure the COACh to drive five wire type touchscreens. The COACh incorporates all logic functions necessary for system operation and places only the physical drive electronics outboard to the chip. This allows the user to select the desired drive components based on the individual application and prevents chip degradation which may occur when drive operating characteristics are exceeded.

SPECIFICATIONS

- Single-chip design for compact integration into circuitry via 68 pin PLCC socket. No additional control microprocessor or PROM is required.
- RS-232 bi-directional communication, handshaking support, and on-board diagnostics ensure fast, secure data transfer and easy troubleshooting.
- Communication can be configured for a wide range of baud rates
- On-board calibration, coordinate scaling, and programmable output rates allow for application-specific performance tuning
- User configurable digital filtering
- On-board one shot or continuous timer
- All settings storable in off-chip NVRAM
- CMOS chip provides low power consumption
- Operating temperature: 0°C to 70°C, Storage temperature: -25°C to 85°C
- Humidity: 95% RH, non-condensing

COACh starter kit: For those customers designing with COACh for the first time, we offer a COACh starter kit. It contains 18 chips, the 2210 serial controller card, a sample 10.4" touchscreen and the COACh application manual: 946665-000.
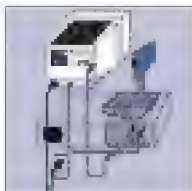
AccuTouch COACh chip: Only for OEM customers: 115275-000

New ask for the COACh chip with extended features, such as sleep mode and low power.

Serial, PC-Bus card and USB-Controllers

Elo offers several types of internal and external controllers for AccuTouch touchscreen applications: a serial controller card which is typically mounted inside the display housing, a PC-Bus card and - new - a USB-controller that connects to the flexible USB-port. The serial controller card is also available in a small enclosure, designed for mounting externally on the back of the display.

SERIAL INTERNAL		SERIAL EXTERNAL	PC-BUS	USB INTERNAL
New: 3000	**2210**	**2210 MX**	**PC-Bus**	**New: 3000U**
Serial controller card connects to the serial port size: 84 x 54 mm	Serial controller card connects to the serial port size: 84 x 54 mm	Serial controller box connects to the serial port, for mounting on the back of the display	Connects to ISA and EISA systems, half slot controller card	USB controller card connects to USB port size: 84 x 54 mm
On demand	part number: 055165-000	part number: 462337-000	part number: 981411-000	On demand

ACCUTOUCH CONTROLLER ACCESSORIES

Cables and hardware, necessary to integrate and connect the controllers into a display.

SERIAL INTERNAL	SERIAL EXTERNAL	PC-BUS	USB INTERNAL
o r 734849-000	o r 877989-000	• 454173-000 - External	On demand
Internal mounting kit for serial controller	Keyboard power tap	serial output cable,	
Includes mounting hardware to install an	standard (includes	DB9M to DB9F	
internal serial controller.	transient protection cable)	• 899389-000 - Transient	
	o r 073089-000	protection cable	
o r single cables	Keyboard power tap, PS/2		
• 928367-000 – Internal power cable,	(incl. transient protection		
1x2F with twisted pair	cable)		
• 459635-000 17" ground with ring terminals	o r 460987-000		
• 942741-000 – Internal serial output	International wall mount		
cable, 2x5F to DB9F	power supply (incl. transient		
• 454173-000 – External serial output	protection cable)		
cable, DB9M to DB9F	o r 520467-000		
o r 084037-000 – External serial cable for	Internal monitor supply cable		
Macintosh, DB9M to 8-pin mini-DIN male			

ACCUTOUCH TOUCHSCREEN INSTALLATION KIT

• 458095-000 - Incl. double-sided adhesive tape, velcro, cable ties and screw hardware commonly used in touchscreen installation.
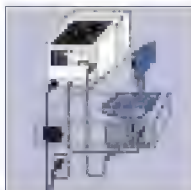
Note: All products, prices and availability subject to change without notice.

ELO
TOUCHSYSTEMS

IntelliTouch controllers

Serial, PC-Bus card and USB-Controllers

Elo offers several types of internal and external controllers for IntelliTouch touchscreen applications: a serial controller card which is typically mounted inside the display housing, a PC-Bus card and - new - a USB-controller that connects to the new flexible USB-port. The serial controller card is also available in a small enclosure, designed for mounting externally on the back of the display.

SERIAL INTERNAL		SERIAL EXTERNAL	PC-BUS	USB INTERNAL
New: 2500	**2310B**	**2310 MX**	**Serial controller & RS-232 card**	**New: 2500U**
Serial controller card connects to the serial port size: 84 x 54 mm	Serial controller card connects to the serial port size: 82 x 89 mm	Serial controller box connects to the serial port, for mounting onto the back of the display	Serial controller card and PC Plug-in card to provide an additional COM-port	USB controller card connects to USB port size: 84 x 54 mm
part number: 170152-000	part number: 244791-000	part number: 304749-000	On demand	part number: 714259-000

INTELLITOUCH CONTROLLER ACCESSORIES

Cables and hardware, necessary to integrate and connect the controllers into a display.

SERIAL INTERNAL	SERIAL EXTERNAL	PC-BUS	USB INTERNAL
o r 934201-000	o r 099369-000	On demand	On demand
Internal mounting kit for serial controller	Keyboard power tap		
Includes mounting hardware to install an	cable pack		
internal serial controller	o r 538635-000		
	External power mount		
o r single cables	cable pack		
• 889507-000 – Internal power cable for	o r 298361-000		
2310B/2500 controller with flying leads	Internal power mount		
• 459635-000 - 17" ground with ring terminals	cable pack		
• 942741-000 - Internal serial output cable, 2x5F to DB9F			
• 454173-000 - External serial output cable, DB9M to DB9F			
o r 084037-000 - Serial to Mac			

Note: All products, prices and availability subject to change without notice.

TOUCHSYSTEMS

Elo's TouchTools

All the tools you need for a successful touchscreen installation

Elo has long been recognized for its leadership not only in touchscreen hardware technology, but also for software drivers, diagnostic tools and touch accessories. With our award-winning drivers – usually the first on the market for new operating systems – Elo has set the standard in the industry for functionality, usability and compatibility in touchscreen drivers, diagnostics, and development tools. Elo's TouchTools include:

Elo TouchTools CD-ROM (part number: 450261-000)

This CD-ROM is shipped free with all Elo touchmonitors and includes all Elo software drivers ("MonitorMouse"), application software, diagnostic programs, technical manuals and documentation.

As for the software drivers, it contains:
- MonitorMouse for Windows NT
- MonitorMouse for Windows 95/98
- Windows 98 USB TouchTools
- MonitorMouse for Windows CE
- DOS & Windows 3.x Driver Guide, which contains DOS driver (ELODEV) / DOS and Windows mouse emulator (MonitorMouse for DOS & Windows 3.x) / Keystroke emulator (TouchBack)
- MonitorMouse for Macintosh
- MonitorMouse for OS/2
- DOS Programmer's Toolkit - includes TouchUp and TouchBack
- MonitorMice for NT 4.0

Driver updates are free for Elo customers and may be downloaded from our website: www.elotouch.com
Third party drivers for Linux and other UNIX derivates available on demand.

MonitorMice

Elo has a patented software technology that enables a single PC to support multiple screen users in a Windows environment – up to 32 touchmonitors can run from one PC under Windows NT!

When fitted with an Elo touchscreen, multiple monitors connected to a single PC through a multiport video card can run separate applications. Additionally, when connected through a video splitter, monitors can run with identical images. Thanks to MonitorMice, costs are significantly reduced for a range of markets and applications such as: POS, process control, financial applications, education and training, etc.

Technical manuals

We supply three manuals: the AccuTouch Product Manual, the IntelliTouch Product Manual and the SmartSet Technical Reference Controller Manual. Up to 24 hardcopy manuals are provided free upon request with hardware orders. Electronic copies of the manuals are downloadable from our website at www.elotouch.com

Styli

Elo offers three types of styli:	Elo Part Number
IntelliTouch stylus	395699-000
AccuTouch stylus	442187-000
IntelliTouch armored stylus	853831-000

(Users should independently evaluate the suitability of the product for their application.)

ELO TOUCHSYSTEMS

Elo's Partner Programs

In a continuing effort to increase the availability of touch-based solutions, we have launched two successful Partner Programs. These programs are designed to maximize the synergies between Elo, kiosk companies and software developers, and help us to expand our reach in providing innovative and complete touch solutions to our customers. We started with the programs in the spring of 1999 and will gradually implement them in all European countries. Additional types of programs will be launched in 2000.

The Kiosk Partner Program

A successful kiosk project often requires the expertise of a turnkey kiosk solution provider who offers a wide range of skills in user interface design, kiosk location placement, hardware and software selection and integration, and implementation services. In our Kiosk Partner Program, our objective is to identify and recruit high quality kiosk solution providers who integrate Elo's touchscreens and who can support you throughout all phases of a kiosk launch – from design and manufacturing all the way through to installation and support.

Kiosk companies who qualify for the Kiosk Partner Program receive full marketing support from Elo, including the use of the Elo Kiosk Partner symbol. Participants in this program enjoy the privilege of being promoted by Elo through lead referrals and participation in promotional and advertising opportunities, such as trade shows or mailings.

At the time of printing Elo Kiosk Partners in Europe are:

Cosmo: www.cosmo-it.com
Friendlyway: www.friendlyway.com
Heddier Electronic: www.heddier.com
ICL Retail Systems B.V.: e-mail: sander.honig@ icl.com
Polygon: www.polygon-design.com or www.terminal.de
PresTop: www.prestop.nl
Schiederwerk: www.schiederwerk.de
Systemhaus Alber: www.systemhaus-alber.de

For updated list of partners: www.kioskpartners.com

The TouchReady Program

Elo's TouchReady Software Partners unite Elo's technology with the world's leading touch software developers to complement Elo's comprehensive array of touch-based hardware solutions available worldwide. The TouchReady Program will allow Elo not only to create added value for software developers, but also to directly serve Elo customers seeking software designed for touch applications by providing them with a directory of pre-qualified software developers ready to offer them a solution. The TouchReady symbol further promotes the use of touch-enhanced applications worldwide and increases awareness of the full breadth of 'touch' software available today.

Software developers who qualify for the TouchReady Program receive full marketing support from Elo, including the use of the TouchReady symbol. Elo's TouchReady partners will also benefit from participation in promotional and advertising opportunities, such as trade shows, and gain access to Elo's industry-leading application engineers, as well as other Elo resources like Channel Connection, a section of Elo's Web site reserved for its partners.

At the time of printing Elo TouchReady Partners in Europe are:

Filsinger: www.filsinger.de
IKV+ + GmbH: www.ikv.de
ProVisio: www.sitekiosk.com
Wegis Informationssysteme: www.wegis.de

For updated list of partners : www.touchready.com

Elo is currently actively seeking more companies to join its European Partner Programs. For more information on Elo's Partner Programs, please contact us at Elo TouchSystems in Belgium on + 32 16 35 21 00, or by e-mail at the following address: vreyser@ elotouch.com.

Ten tips for effective touch applications

Ten simple pointers that can make the difference between success and failure for your touch-activated application.

1 **Run your application full screen** – Remove title bars and menu bars so your application can take full advantage of the entire display area.

2 **Use bright background colors (not black)** – Bright backgrounds in your application will hide fingerprints and reduce glare. Dithering or other patterned backgrounds (for example, the "crumpled paper look") help the eye focus on the screen image instead of reflections, even in areas where there are no icons or menu choices.

3 **Use a simple point-and-click interface with large buttons** – Dragging, double-clicks, scroll bars, drop-down menus, multiple windows, or other elements can confuse the typical user and detract from user-friendliness and efficiency.

4 **Turn the cursor off so your user will focus on the entire screen instead of the arrow** – A cursor on the screen makes the user think, "How do I get the arrow to do what I want?" Remove the cursor, and the user's thinking and actions become direct instead of indirect – thereby unlocking the true power of touchscreens.

5 **Always give your users feedback as soon as they touch the screen** – Immediate feedback is critical to reassure the user that a touch has registered. Responses can be visual, as 3-D button effects similar to those found on a standard Windows button. Or you can provide an audio response, such as a "click" or other sound output whenever a user touches the screen.

6 **Make your application fun and fast** – Users will walk away from a sluggish system. You can keep their attention with a quick response to touches. Speedy systems also reduce vandalism. Graphics modes offering excessive colors or high resolution only slow down your system.

7 **Make the application intuitive, limit choices, and guide the user as much as possible** – Test your application on focus groups. If users pause in confusion – even for a moment – you've identified the areas that need improvement.

8 **Digitized speech (via a sound card) can talk users through your application** – Because the human brain can simultaneously process voice while absorbing an image, there is something almost magical about a user interface that provides voice prompts and touch response. The better kiosk applications exploit this knowledge for maximum effect. For example: "Touch the first letter of the company you are looking for." Click. "Now touch OK." Click.

9 **Make your application part of an attractive package** – Animation and large fonts help attract users to kiosk applications. The actual design of the kiosk cabinet should also be attractive and sturdy.

10 **Keep the following in mind when designing a kiosk cabinet** – Are you using forced-air ventilation? Put your fan at the top, near the monitor's vents. To minimize the airborne dust from footsteps, keep the intake away from the floor. Keep air from entering around the monitor's face. Point your speakers in the direction of your user's ears. Use an Elo kiosk touchmonitor. Otherwise, allow for variations in the physical dimensions of monitor models as they change frequently. Finally, choose a finish that does not show fingerprints – avoid polished stainless steel, chrome, or glossy black paint.

Trademark and Copyright information

AccuTouch, AccuTouch HL, COACh, IntelliTouch, IntelliTouch Ultra, SecureTouch, iTouch, Kiosk Touchmonitor, MonitorMouse, MonitorMice, ELO-DEV, SmartSet, TouchUp, Plug and Touch and TouchBack are trademarks of Elo TouchSystems, Inc. All other trademarks are the property of their respective owners.

AccuTouch products are covered by one or more of the following patents: 5,220,136; 4,220,815; 4,661,655; 4,687,885; 4,731,508; 4,822,957; 5,045,644; 4,659,873; 4,777,328; 4,797,514; 4,933,660.

IntelliTouch products are covered by one or more of the following patents: 4,642,423; 4,644,100; 4,645,870; 4,700,176; 4,746,914; 4,791,416; 4,825,212; 4,859,996; 4,880,665; RE.33.151; 5,591,945.

Product catalogue subject to change

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Russia: Quarta TouchSystems
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E-mail: info@ inputech.ch • Internet: www.inputech.ch

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